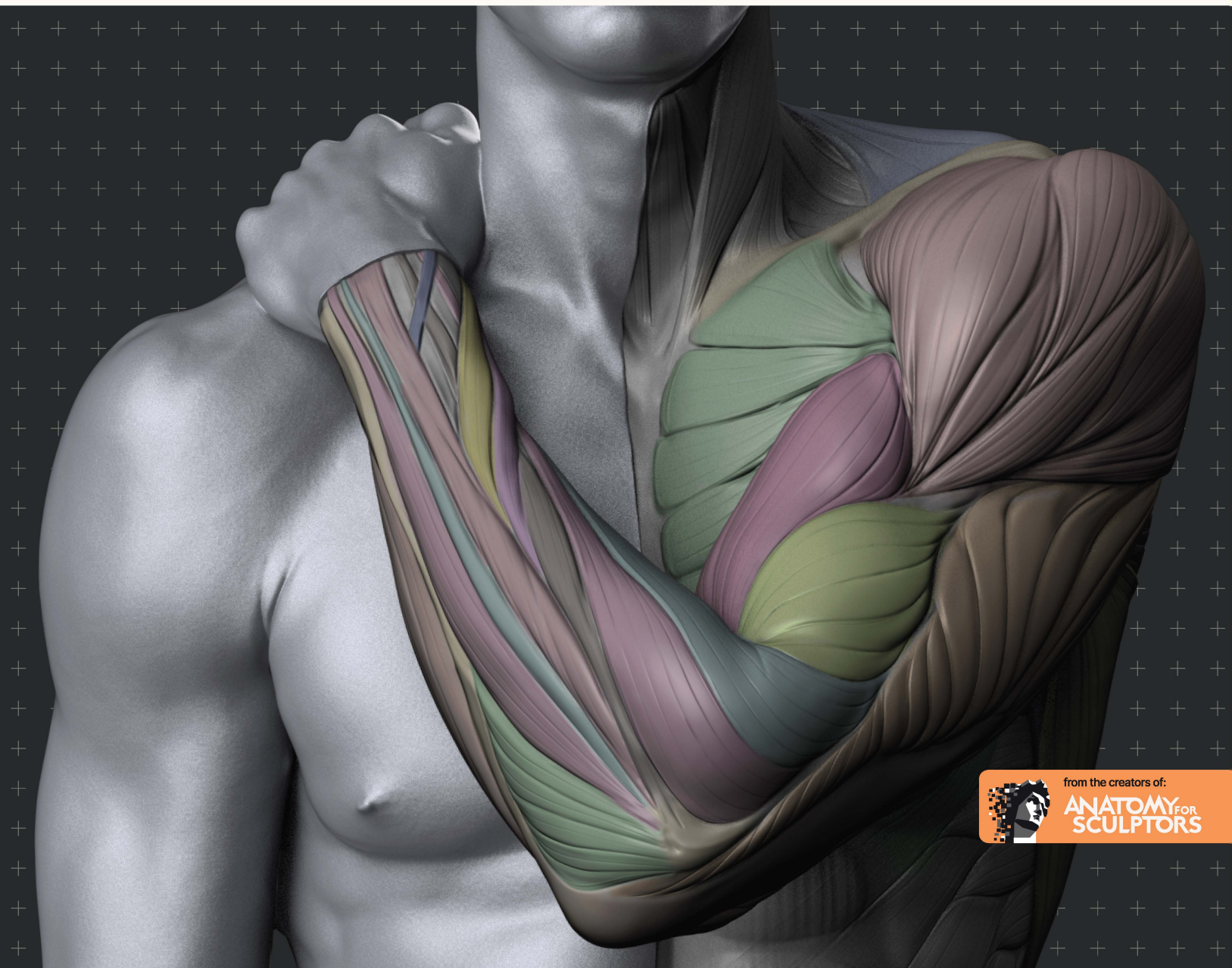


ULDIS ZARINS

Arm and Hand *in Motion*

An artist's guide to understanding form



from the creators of:
**ANATOMY FOR
SCULPTORS**

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First Edition, 2025

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Why **Arm and Hand** *in Motion*

by Uldis Zarins

The upper limb is one of the most complex and variable parts of the human body. Maybe only the face is more nuanced. But when it comes to motion, nothing competes with the arm and hand. The shoulder rotates and pulls the torso with it. Forearm pronation and supination are influenced by different degrees of elbow flexion. Every movement changes the surface forms in ways you can't fake or guess.

When you sculpt, draw, or create a 3D character, you feel this complexity right away. You can't just use a rig or duplicate the same old muscle shapes – each position changes the form, and you have to sculpt it with a new mindset. And for that, you need references. Ones you can trust. From all angles. Made with artists in mind.

That's what this book is.

My source material for this book was raw 3D scans of real models, made together with my team. From there, I rebuilt each pose four times: the cleaned-up surface form, the color-coded muscle model, and two levels of block-outs. Each version gives you multiple ways to study the same pose.

When I build block-outs, I usually rely on a clear reduction scheme: breaking down a complex organic form into a set of base shapes. But while working on *Arm and Hand in Motion*, I quickly realized that one scheme doesn't fit every pose. Each new position changes the surface forms so much that the simplification that works in one case falls apart in another.

I had to rethink multiple block-outs from scratch – again and again. That kind of rebuilding isn't just a technical task. It's also psychological. You're constantly breaking down and reassembling the structure you just created, pose by pose.

Another challenge was the female forms, where subcutaneous fat softens and merges shapes. It's not just smaller or smoother – it's different. The anatomy is still there, but it's hidden under a different surface logic.

At times, it was hard to stay motivated. The sheer amount of reworking is exactly why no one had done this before, at least not in 3D form. But that's also what makes it valuable: every form in this book has been built and rebuilt with care.

My way of simplifying forms – the reduction scheme I use – isn't the only way to look at things. It's just the one I found most useful. There are many ways to interpret and group the complex shapes of the human body, and visual languages can vary widely.

That's why I also include the cleaned 3D scans alongside the block-outs. These scans were my starting point, and this book lets you inspect them yourself. You can see what I saw and decide whether you agree with my interpretation. I've laid out the process fully – the method, the source, and the reasoning – so anyone who wants to test or adapt it can do so. The block-outs don't reveal reality – they interpret it. Materials like this will always be an interpretation.

About a third of the anatomy tips and visual guides we prepared didn't make it into the book – there just wasn't enough space. We chose to prioritize the reference material, especially the form block-outs, because that's what artists rely on most while working. But the rest isn't lost – those insights will inevitably surface in future publications and updates. And a selection of 3D models from this book is also available on our 3D Reference Tool, where you can view them from any angle you need.

This book is built to help artists work. When you're sculpting, drawing, or 3D modeling, it's not anatomy theory you turn to first – it's form. That's why the foundational shapes matter most. The first-level block-outs give you a clear starting point for each pose. Everything else builds on that structure. Muscles are important, but once you're in the middle of a sculpt, it's the simplified forms that guide your hand. That's what this book delivers: practical, reliable references built for real artistic work.

TABLE OF CONTENTS

4 UPPER LIMB ANATOMY

Sex-related differences of the upper limb	6
Bones of the upper limb	8
Muscles of the upper limb	12
Bones of the hand	14
Muscles of the hand	16
Major veins of the hand	18
Major veins of the upper limb	19
Projections of the shoulder blade	20
Landmarks of the shoulder blade	21
Projections of the clavicle	22
Structure of the clavicle	23
Shoulder blade and clavicle in context	24
Order of muscles	26
Deltoid muscle	28
Deltoid parts and movement	29

30 SHOULDER MOVEMENTS

Pose catalogue	30
MTT – T-pose	32
MA – A-pose	38
MT – Flex pose	44
FT – Flex pose	50
MV – V-pose	56
FV – V-pose	62
MF – Forward reach	68
MB – Arms back	76
FB – Arms back	82
MX – Arms crossed	88
FX – Arms crossed	96
MZ – Self-hug	104

110 FOREARM AND ELBOW MOVEMENTS

Forearm Supination and Pronation	110
Pose catalogue	111
Elbow anatomy	
Bony landmarks of the elbow	112
Bending the elbow	113

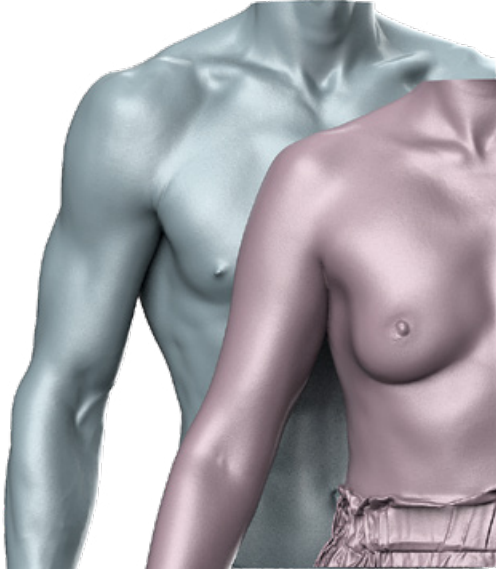
M1 – Straight supinated arm	114
F1 – Straight supinated arm	118
M2 – Straight neutral arm	122
F2 – Straight neutral arm	126
M3 – Straight pronated arm	130
F3 – Straight pronated arm	134
M4 – Straight force-pronated arm	138
M5 – Slightly bent supinated arm	142
M6 – Slightly bent neutral arm	146
M7 – Slightly bent pronated arm	150
M8 – Bent supinated arm	154
F8 – Bent supinated arm	158
M9 – Bent neutral arm	162
F9 – Bent neutral arm	166
M10 – Bent pronated arm	170
F10 – Bent pronated arm	174
M11 – Fully-flexed supinated arm	178
F11 – Fully-flexed supinated arm	182
M12 – Fully-flexed neutral arm	186
F12 – Fully-flexed neutral arm	190
M13 – Fully-flexed pronated arm	194
F13 – Fully-flexed pronated arm	198

202 HAND MOVEMENTS

Pose catalogue	202
MH1 – Relaxed finger spread	204
FH1 – Relaxed finger spread	206
MH2 – Natural hang	210
FH3 – Fist	214
MH4 – Gun grip	218
Holding objects	
Pen	220
Chopsticks	221
Cylinder	222
Sphere	223

SEX-RELATED DIFFERENCES OF THE UPPER LIMB

Front



Lateral view



Front-side view

**Muscle Mass:****Males:** More defined muscles**Females:** Less muscle definition**Size and Length:****Males:** Longer, larger limbs**Females:** Slightly shorter, smaller limbs**Vein Visibility:****Males:** Veins show more due to lower subcutaneous fat**Females:** Veins are less visible due to higher subcutaneous fat**Shoulder Width:****Males:** Broader shoulders form a V-shaped torso**Females:** Narrower shoulders contribute to an hourglass shape**Body Composition:****Males:** Lower body fat makes the build more angular**Females:** Higher body fat creates a softer, curvier build

SEX-RELATED DIFFERENCES OF THE UPPER LIMB

Hand Size:

Males: Large hands with longer fingers, more robust overall structure

Females: Smaller hands with shorter fingers

Finger Thickness:

Males: Thicker, more muscular fingers

Females: Slender, more delicate fingers

Nail Shape:

Males: Wider, flatter nails

Females: Narrower nails with more curve

Vein Visibility:

Males: Veins show more due to lower subcutaneous fat

Females: Veins are less visible due to higher subcutaneous fat

Palm Shape:

Males: Larger, squarer palms

Females: Smaller palms, slightly more tapered

Hair Growth:

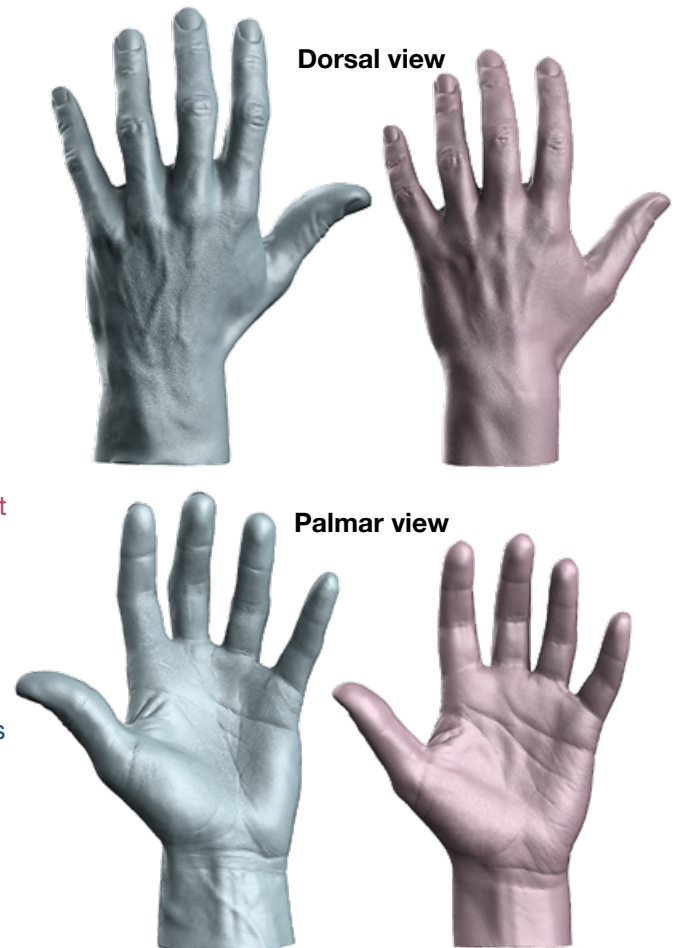
Males: More visible hair growth on fingers and backs of hands

Females: Finer, less visible hair

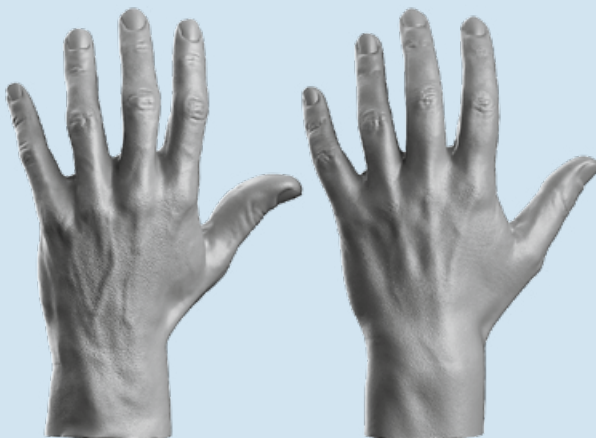
Knuckle Size:

Males: Larger, more prominent knuckles

Females: Smaller knuckles, less defined



It's important to note that these are generalizations, and there is considerable variation among individuals. Additionally, factors such as genetics, age, and individual lifestyle choices can influence the appearance of arms and hands.

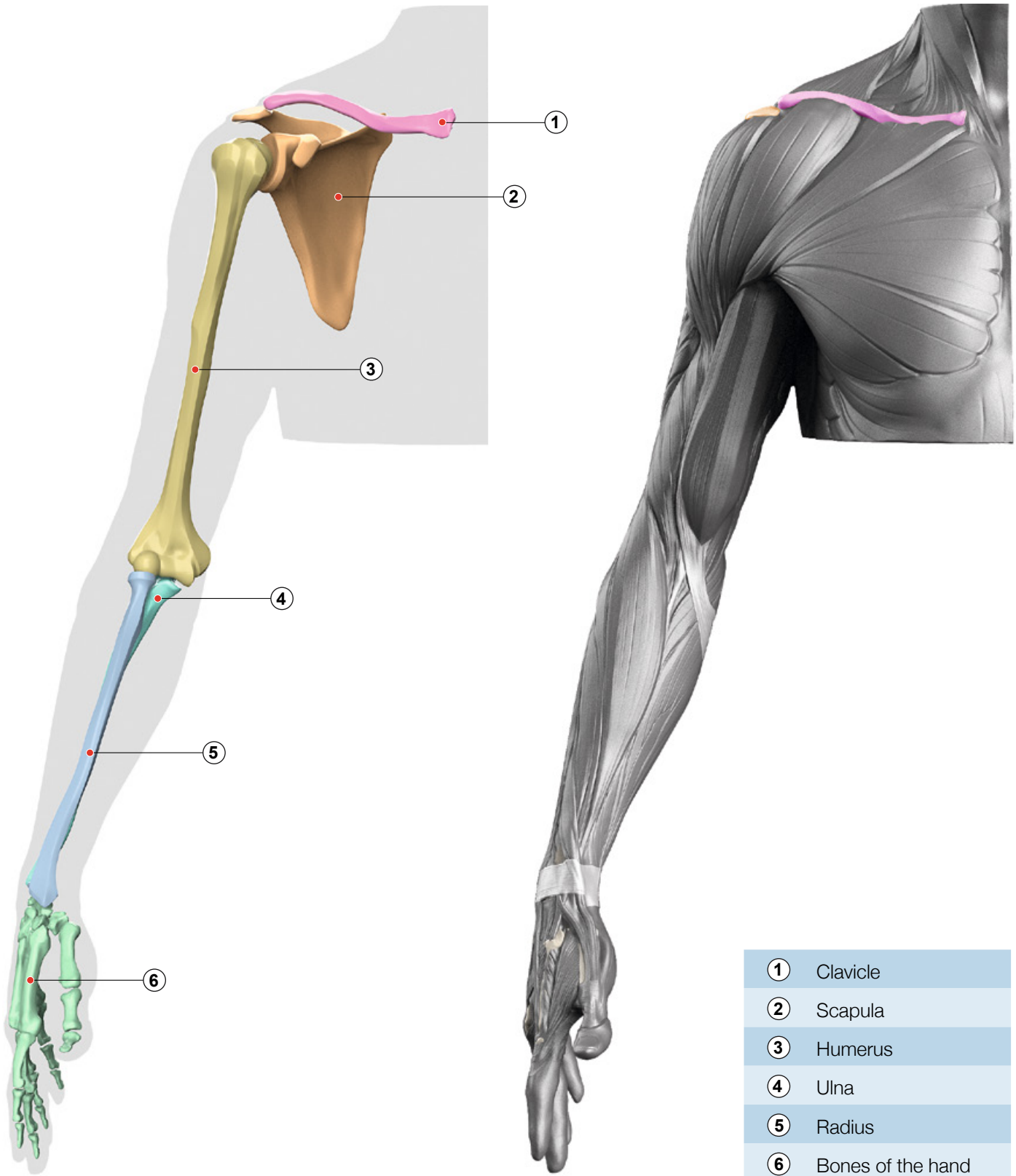


When male hands are scaled down to the size of female hands, they can appear quite similar in artworks or other depictions.

Most differences are primarily size-based. At smaller scales, these distinctions often fade, and individual traits become less noticeable.

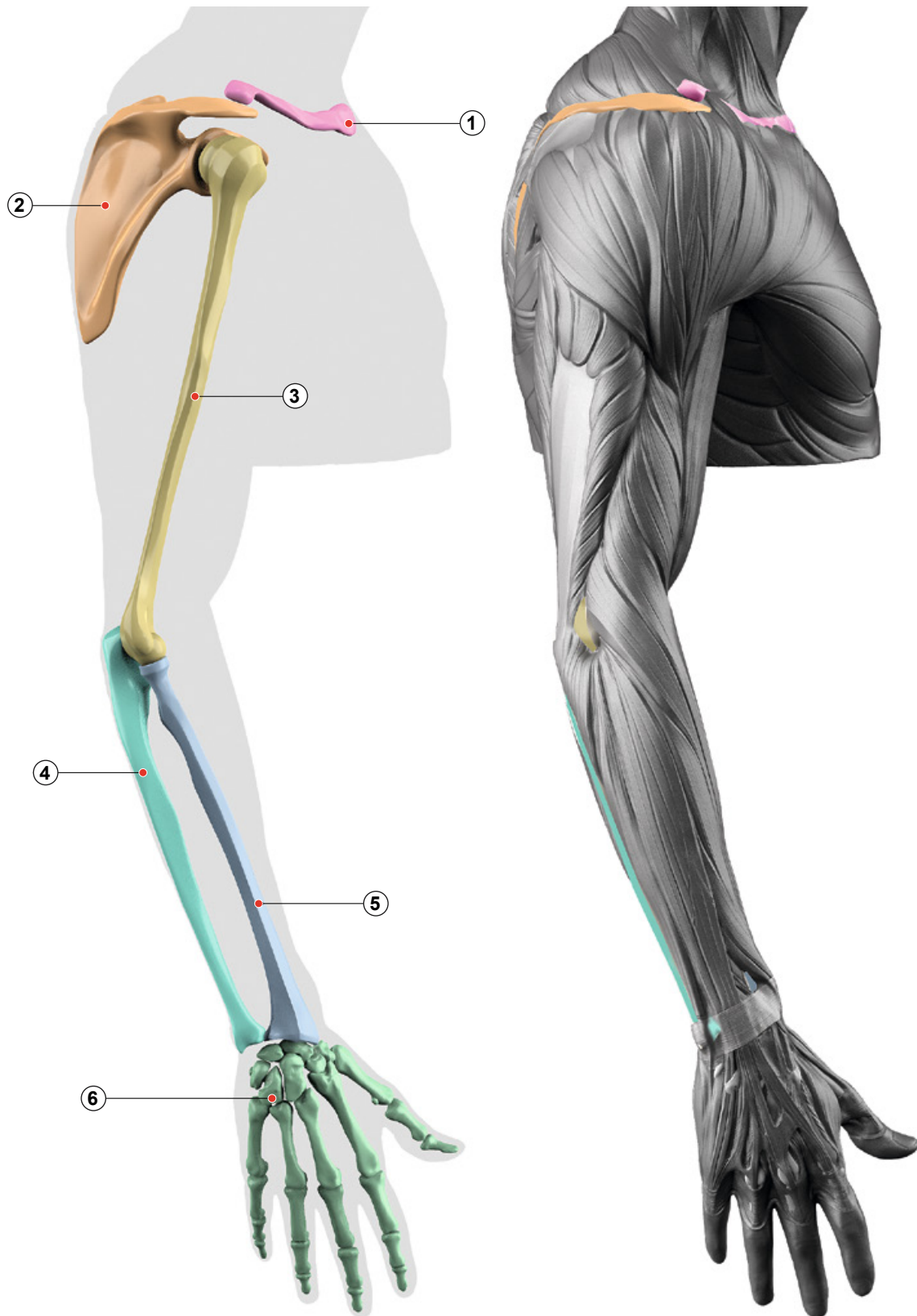
BONES OF THE UPPER LIMB

Front



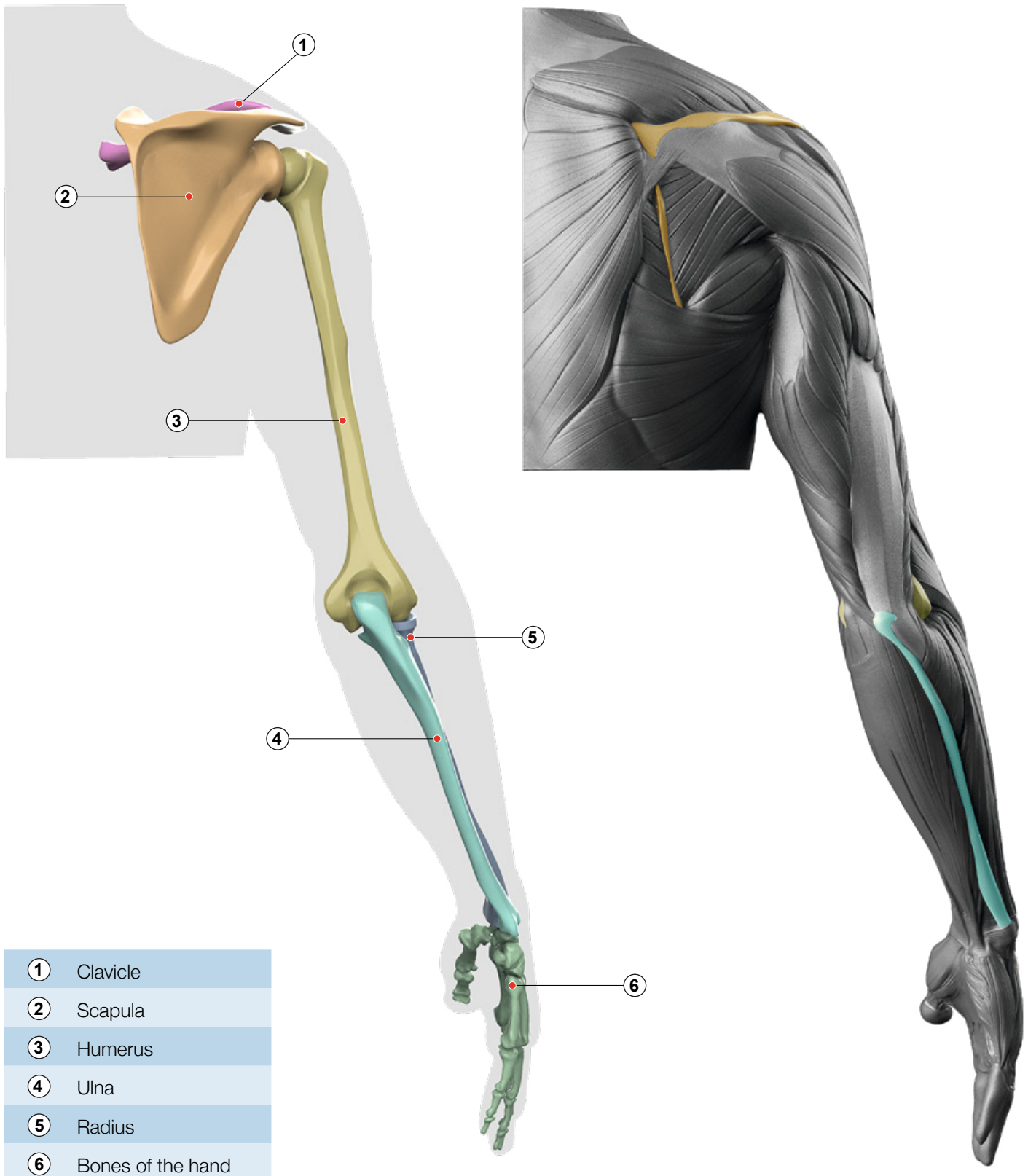
BONES OF THE UPPER LIMB

Lateral view



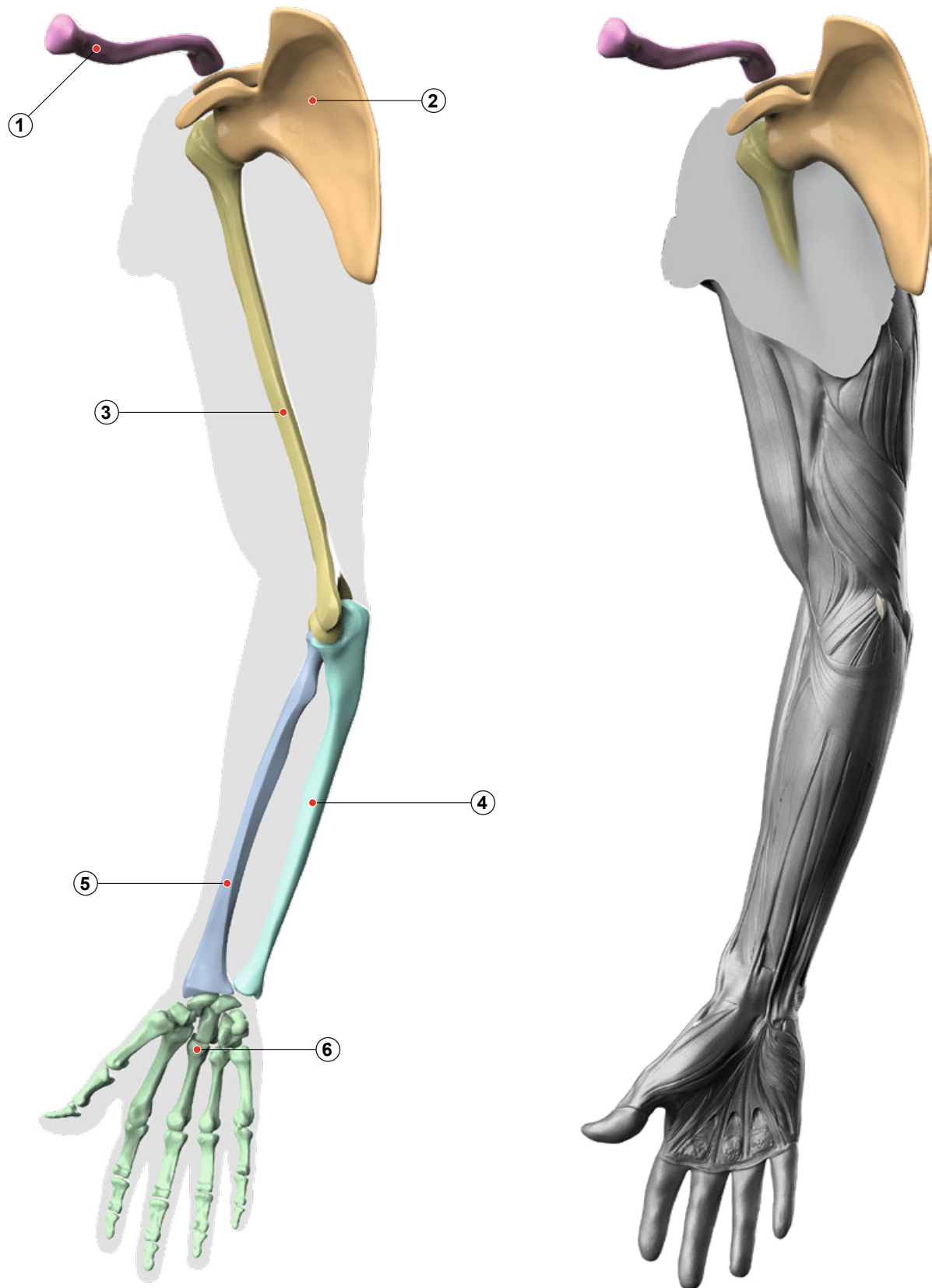
BONES OF THE UPPER LIMB

Back



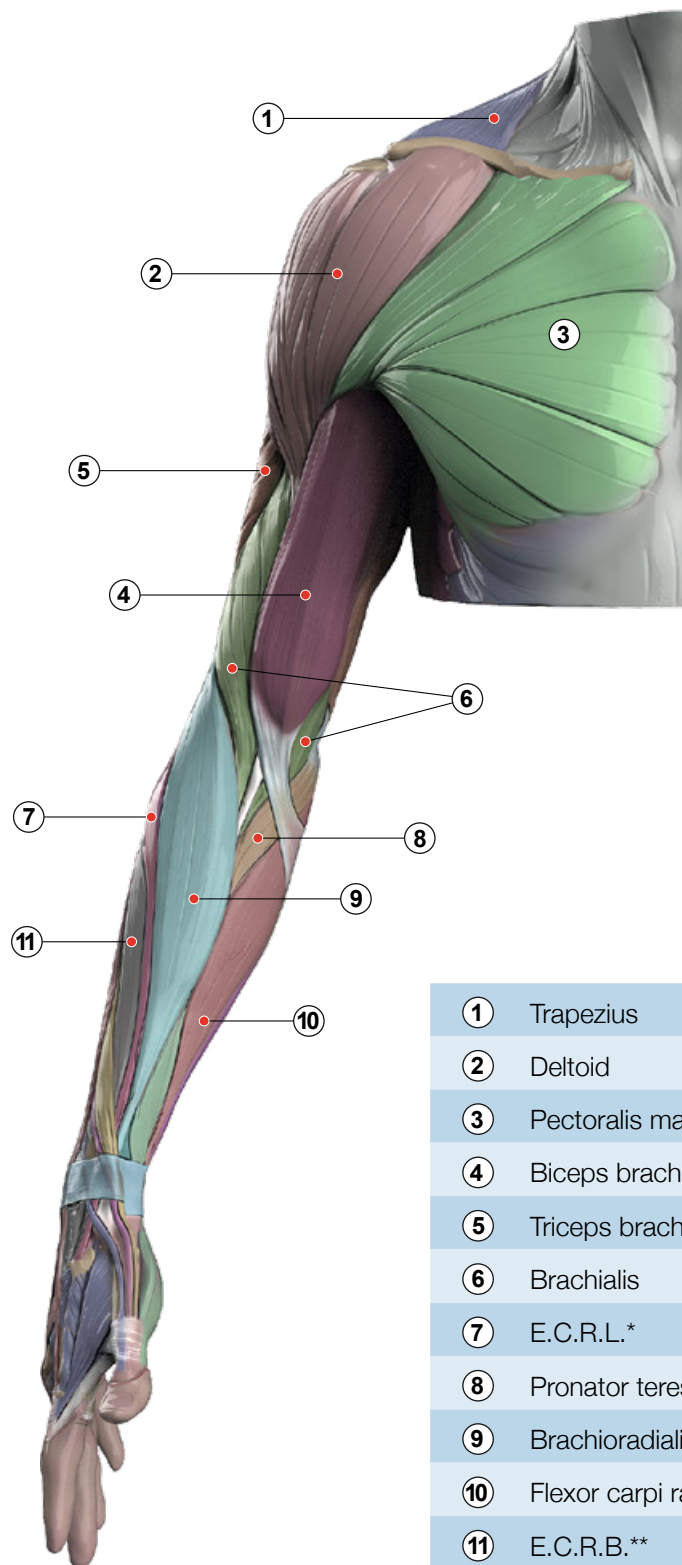
BONES OF THE UPPER LIMB

Medial view

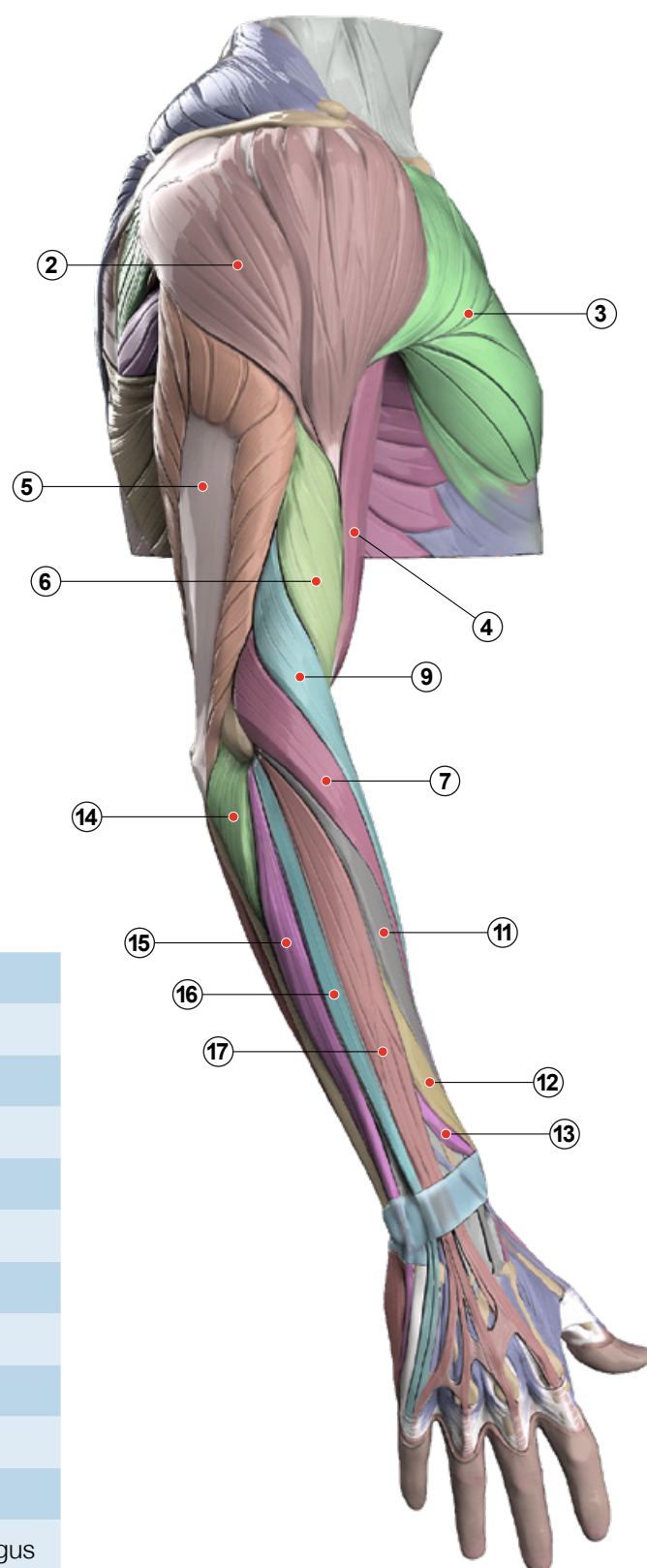


MUSCLES OF THE UPPER LIMB

Front



Lateral view



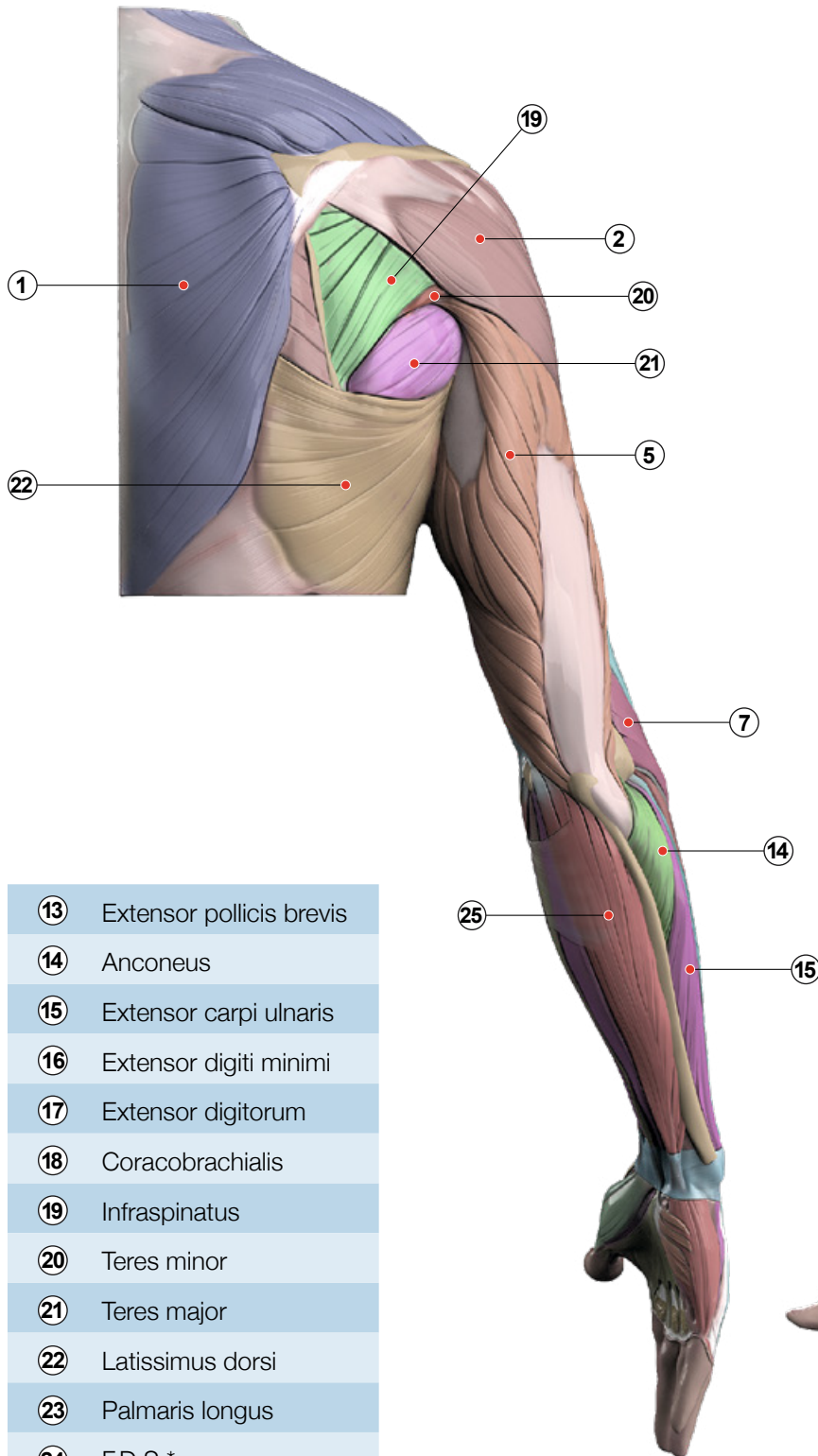
- | | |
|---|--------------------------|
| ① | Trapezius |
| ② | Deltoid |
| ③ | Pectoralis major |
| ④ | Biceps brachii |
| ⑤ | Triceps brachii |
| ⑥ | Brachialis |
| ⑦ | E.C.R.L.* |
| ⑧ | Pronator teres |
| ⑨ | Brachioradialis |
| ⑩ | Flexor carpi radialis |
| ⑪ | E.C.R.B.** |
| ⑫ | Abductor pollicis longus |

* Extensor carpi radialis longus

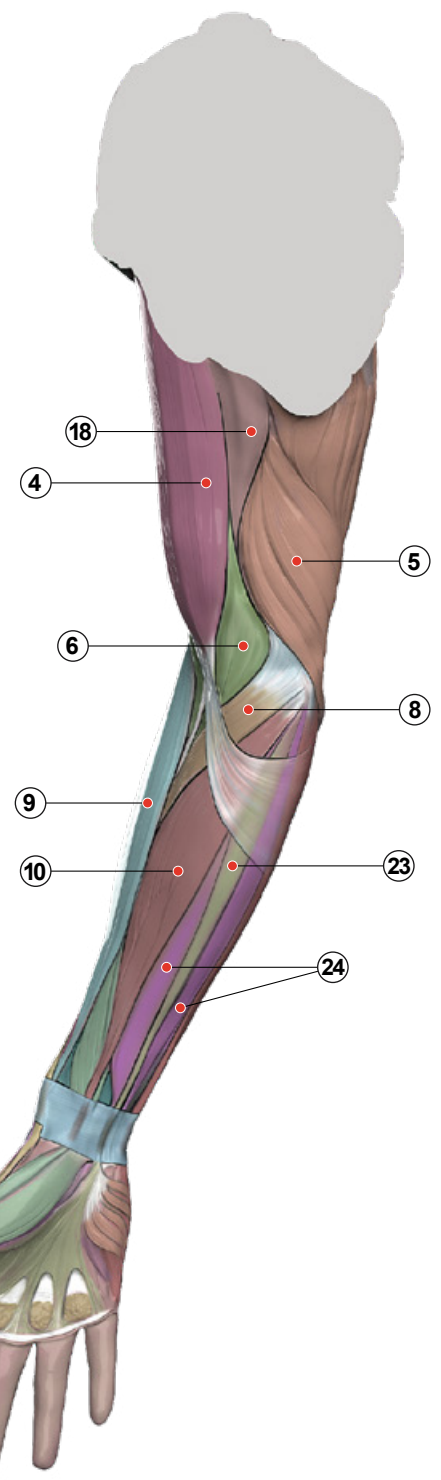
**Extensor carpi radialis brevis

MUSCLES OF THE UPPER LIMB

Back



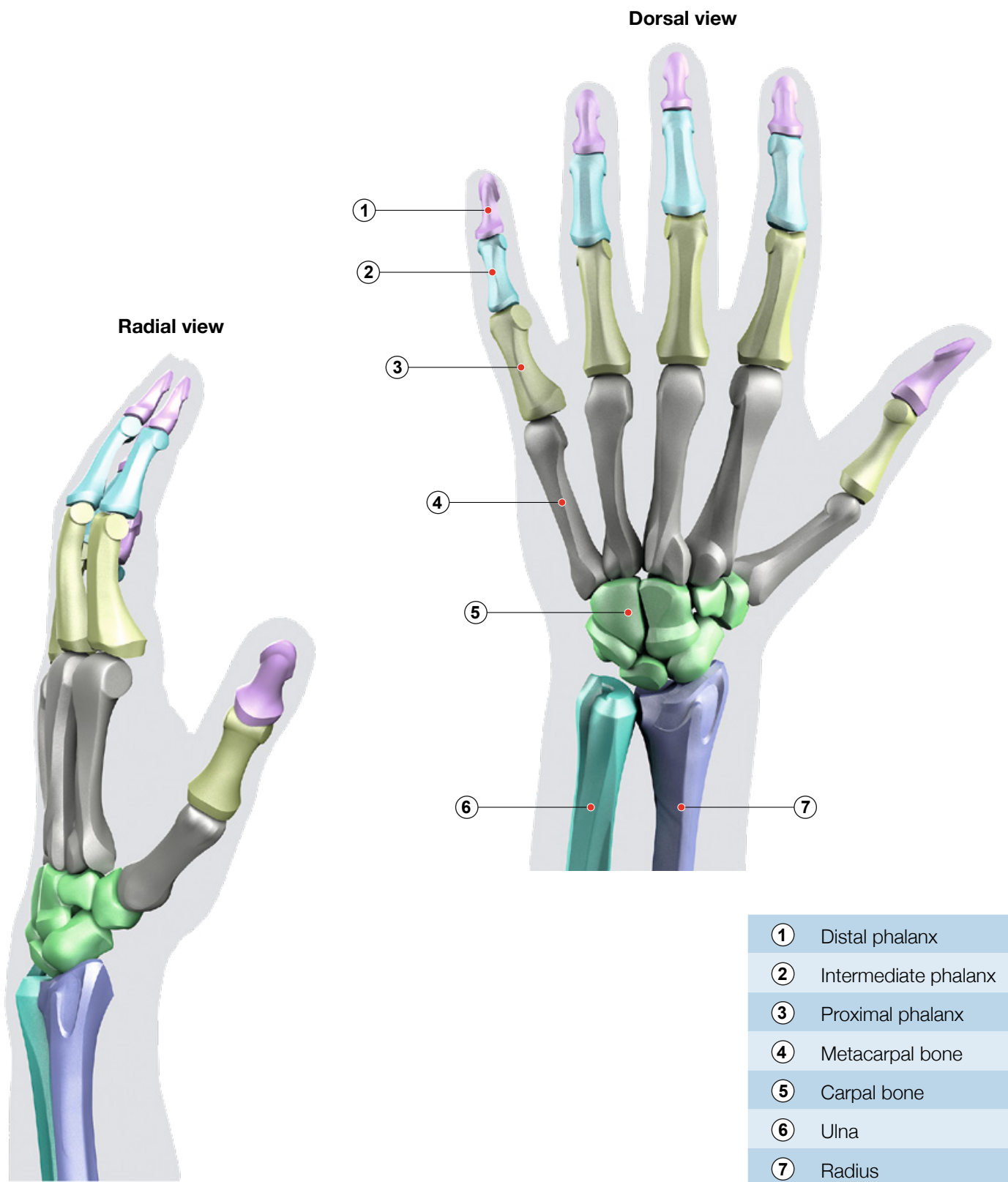
Medial view



- | | |
|----|--------------------------|
| 13 | Extensor pollicis brevis |
| 14 | Anconeus |
| 15 | Extensor carpi ulnaris |
| 16 | Extensor digiti minimi |
| 17 | Extensor digitorum |
| 18 | Coracobrachialis |
| 19 | Infraspinatus |
| 20 | Teres minor |
| 21 | Teres major |
| 22 | Latissimus dorsi |
| 23 | Palmaris longus |
| 24 | F.D.S.* |
| 25 | Flexor carpi ulnaris |

* Flexor digitorum superficialis

BONES OF THE HAND

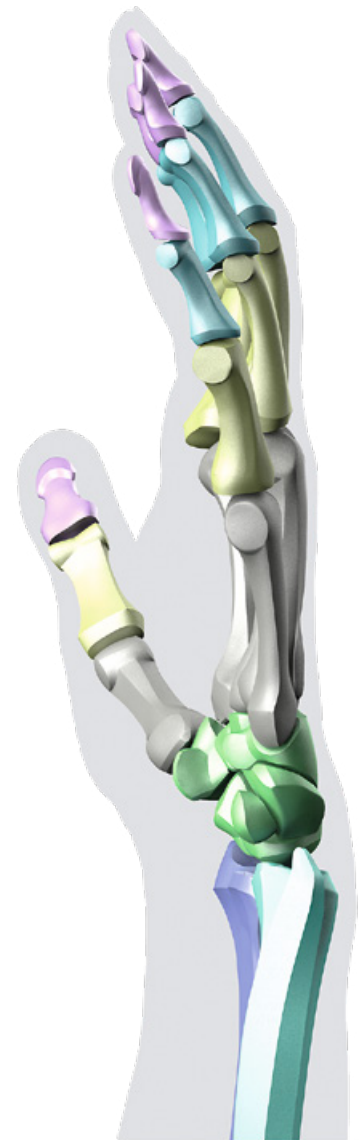


BONES OF THE HAND

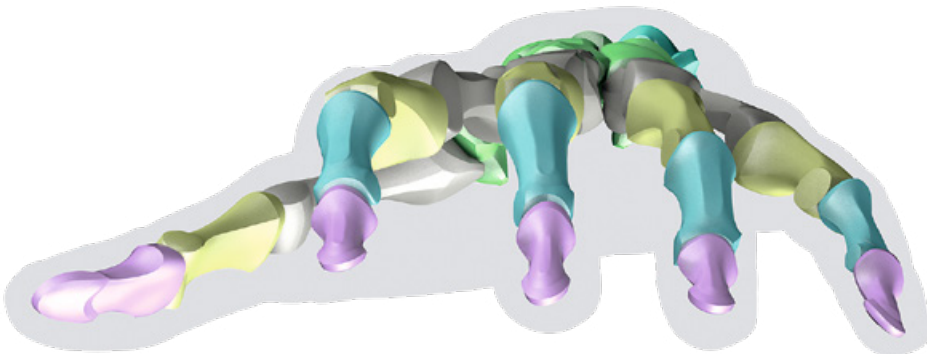
Palmar view



Ulnar view

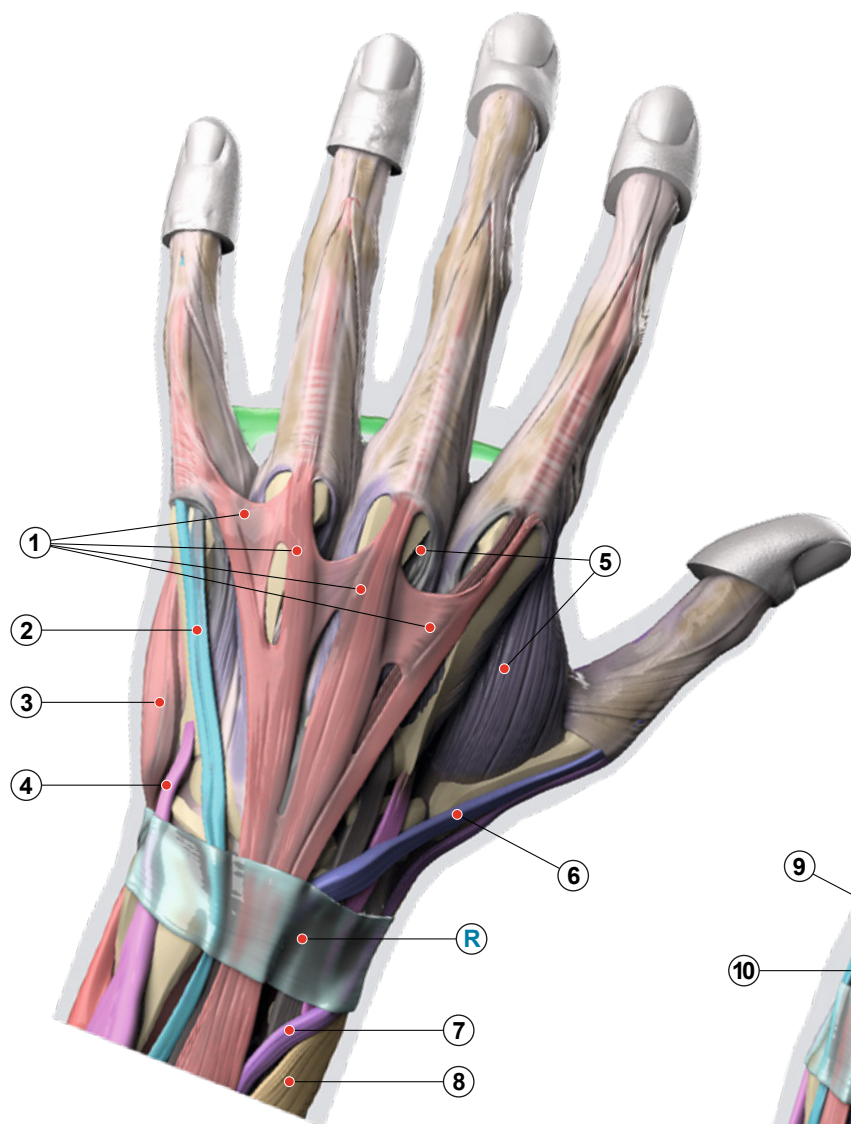


Fingertip view



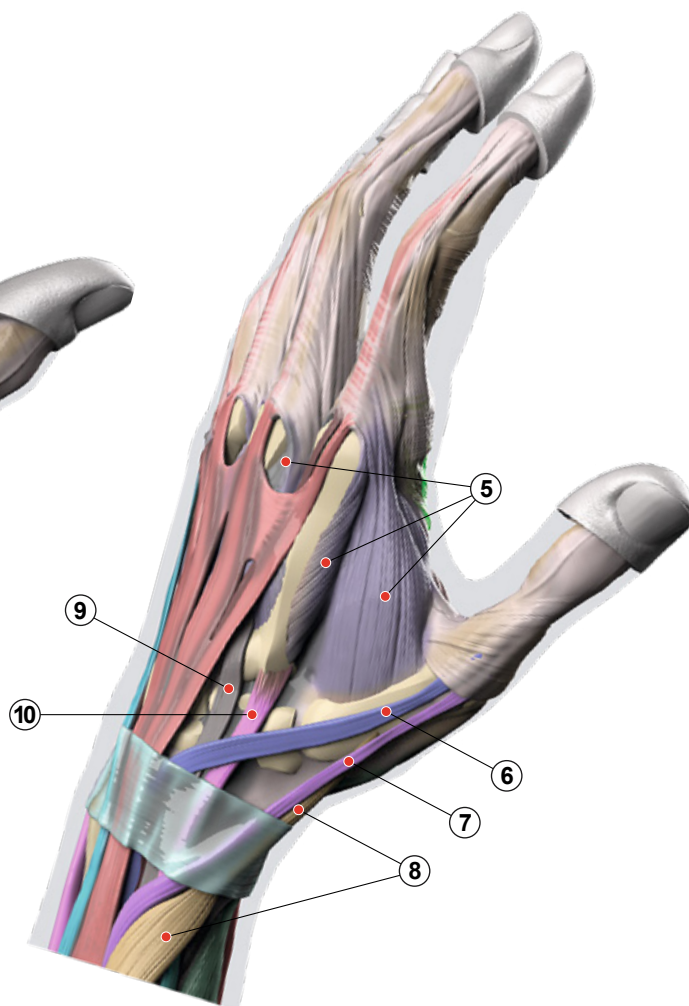
MUSCLES OF THE HAND

Dorsal view



- ① Extensor digitorum
- ② Extensor digiti minimi
- ③ Abductor digiti minimi
- ④ Extensor carpi ulnaris
- ⑤ Dorsal interossei
- ⑥ Extensor pollicis longus
- ⑦ Extensor pollicis brevis

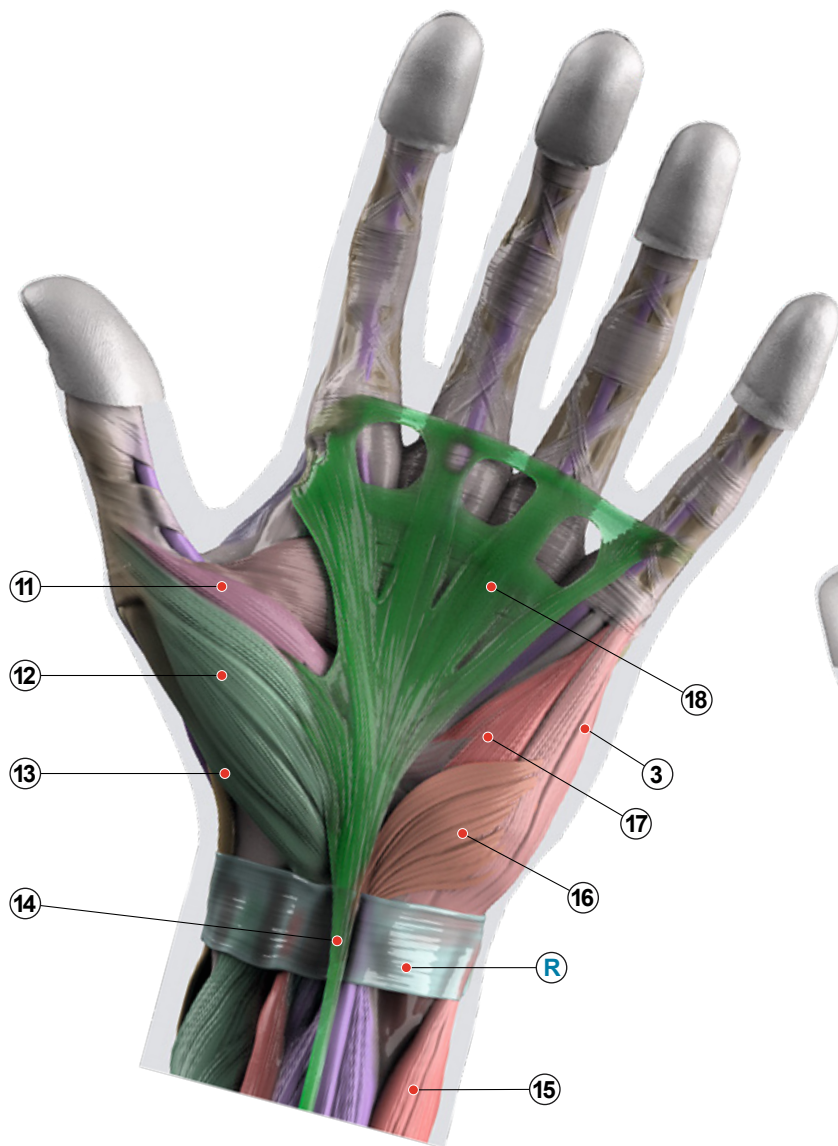
Radial view



- ⑧ Abductor pollicis longus
- ⑨ Extensor carpi radialis brevis
- ⑩ Extensor carpi radialis longus
- R Retinaculum

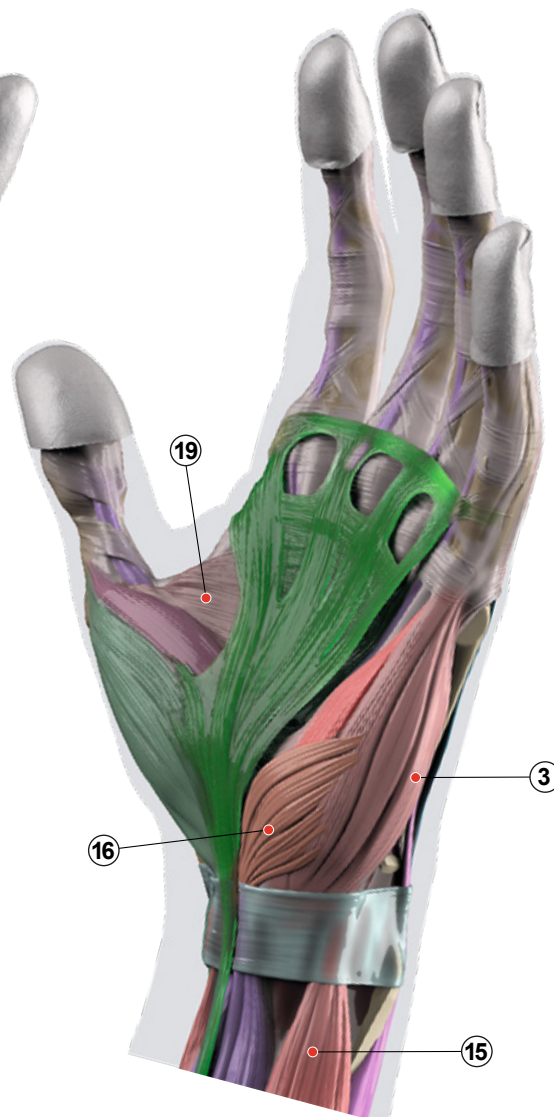
MUSCLES OF THE HAND

Palmar view



- ⑪ Flexor pollicis brevis
- ⑫ Abductor pollicis brevis
- ⑬ Opponens pollicis
- ⑭ Palmaris longus
- ⑮ Flexor carpi ulnaris
- ⑯ Palmaris brevis
- ⑰ Flexor digiti minimi brevis

Ulnar view



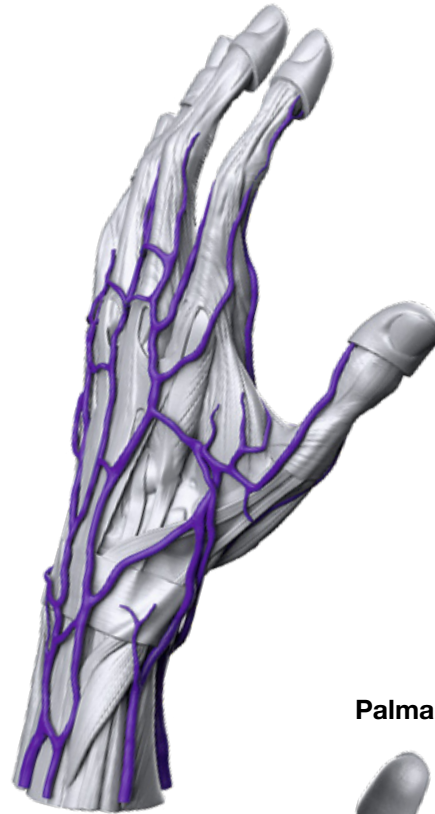
- ⑱ Palmar aponeurosis
- ⑲ Adductor pollicis
- Ⓡ Retinaculum

MAJOR VEINS OF THE HAND

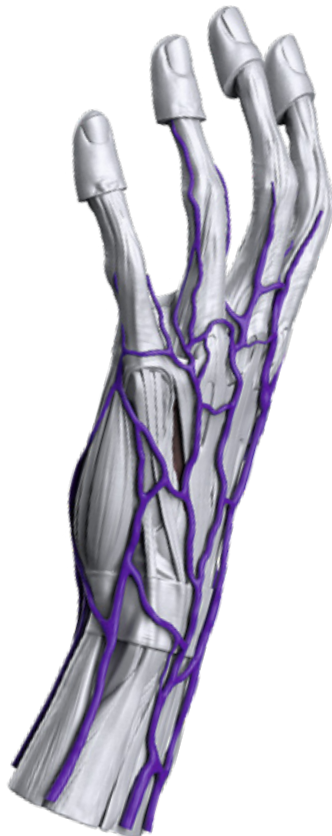
Dorsal view



Radial view



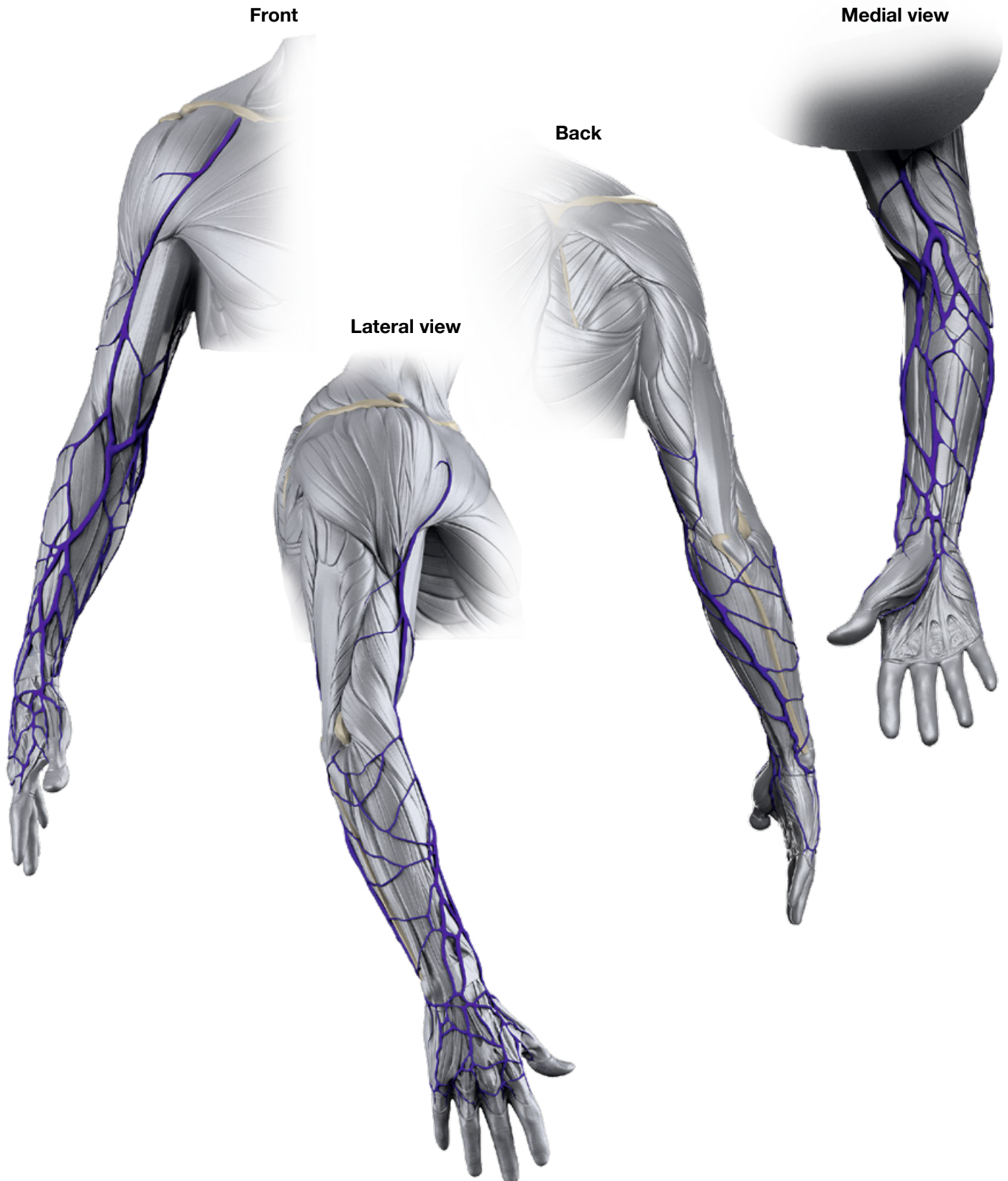
Ulnar view



Palmar view

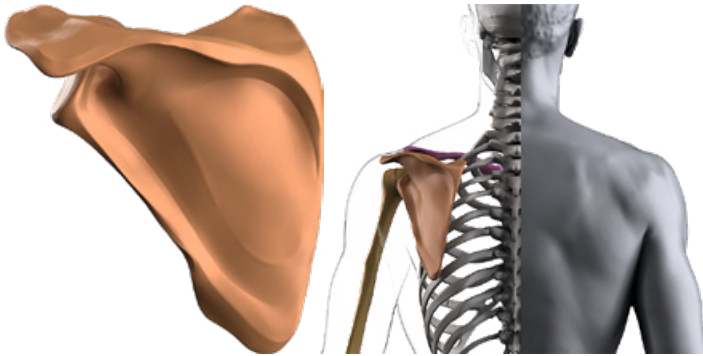


MAJOR VEINS OF THE UPPER LIMB



PROJECTIONS OF THE SHOULDER BLADE

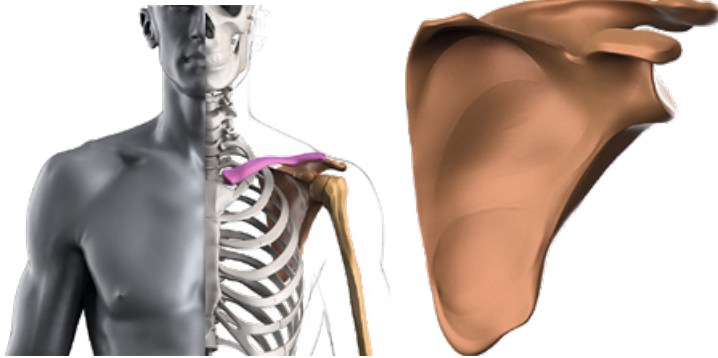
Back



Medial view



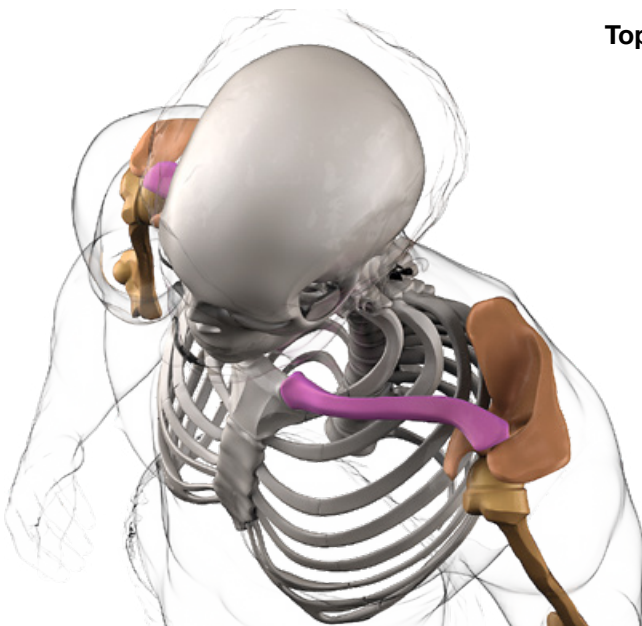
Front



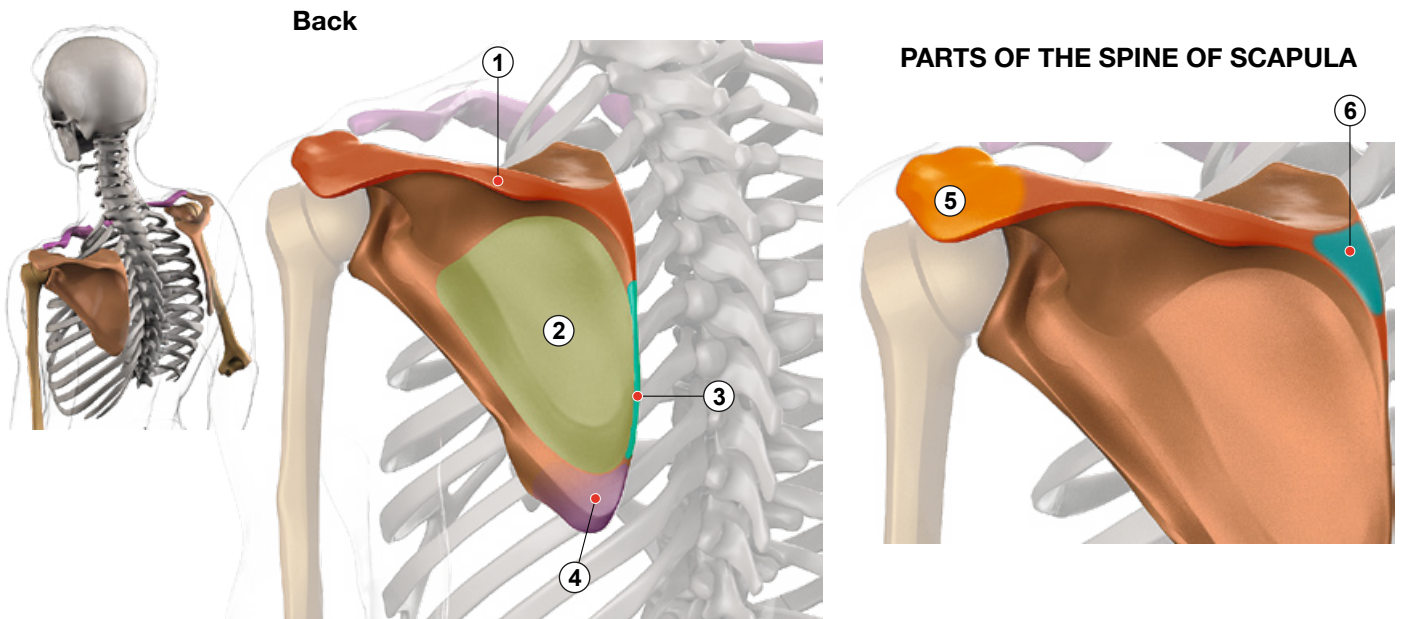
Lateral view



Top view



LANDMARKS OF THE SHOULDER BLADE



① Spine of scapula

② Body

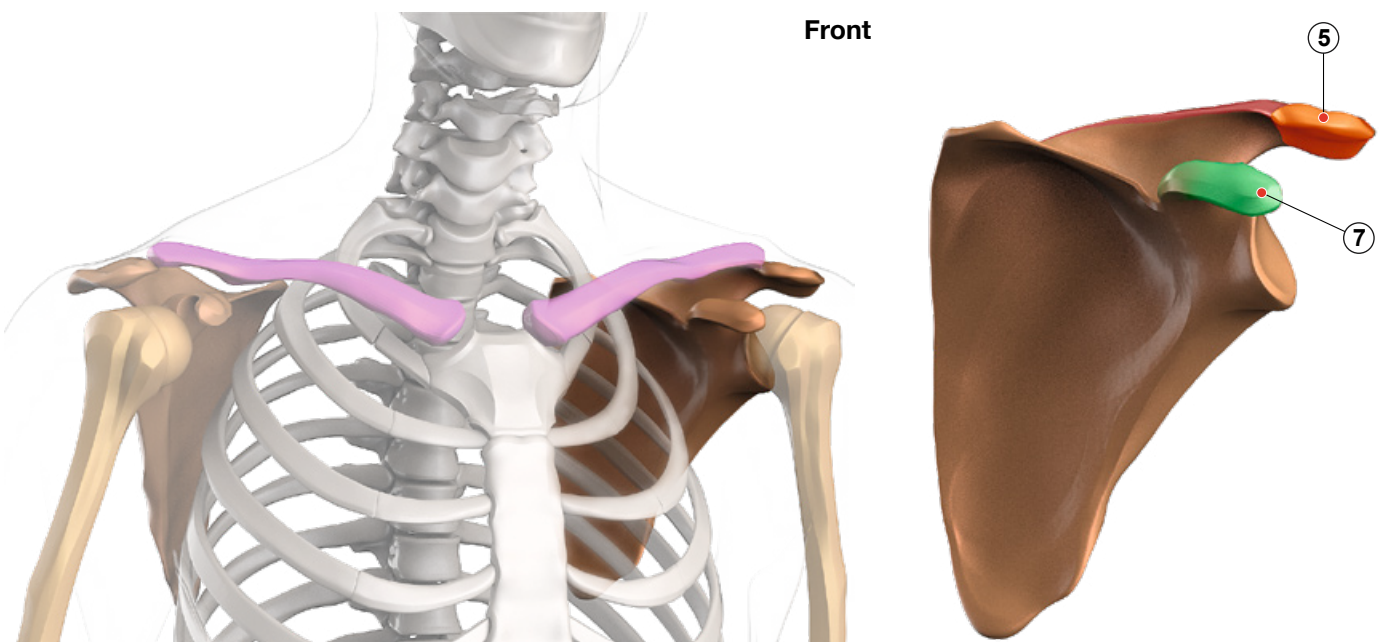
③ Medial border

④ Inferior angle

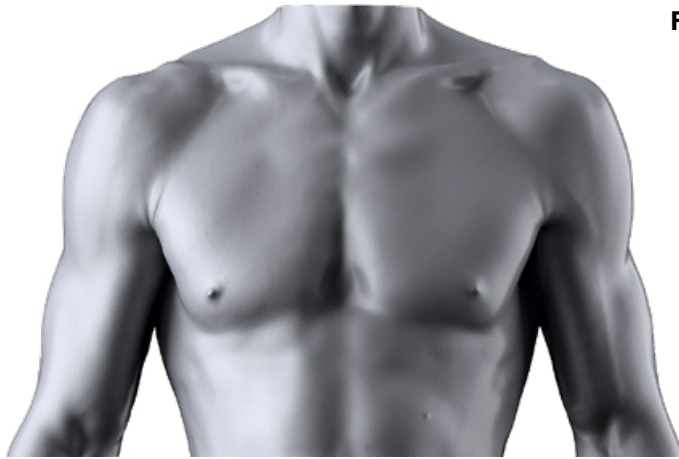
⑤ Acromion process

⑥ Trigonum

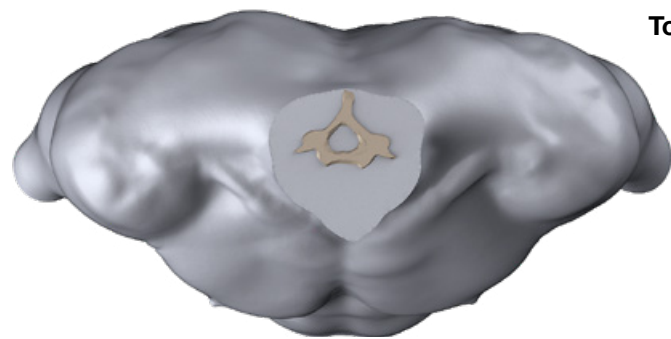
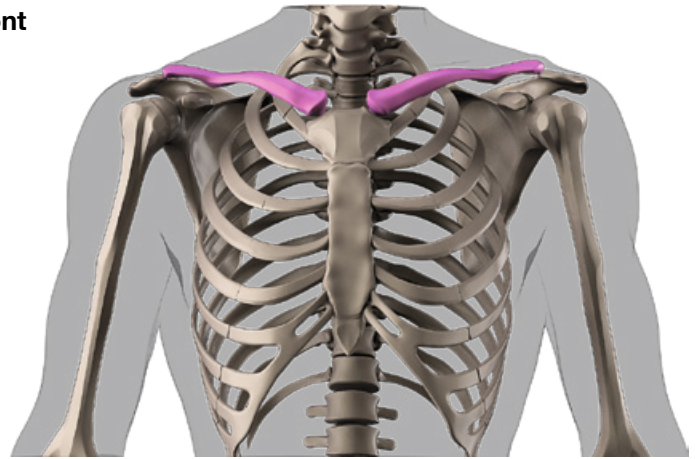
⑦ Coracoid process



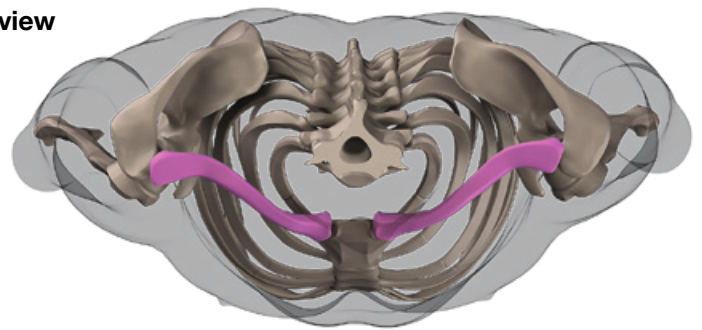
PROJECTIONS OF THE CLAVICLE



Front



Top view

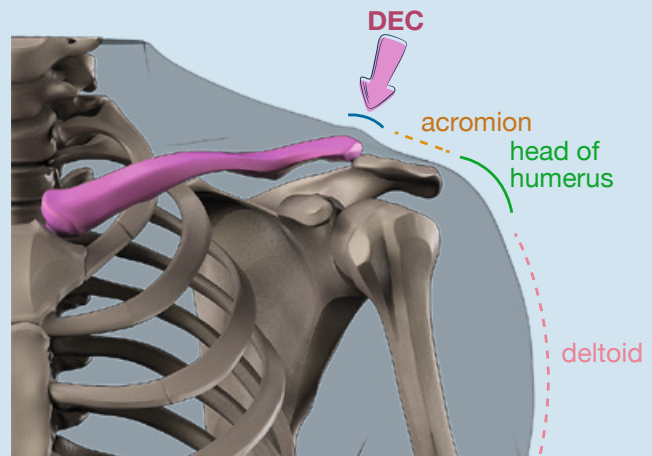


DISTAL END OF CLAVICLE (DEC)

The **DEC** is the highest and most prominent bump on the shoulder. It marks the point where the clavicle meets the acromion and acts as a key bony landmark in shaping the shoulder.



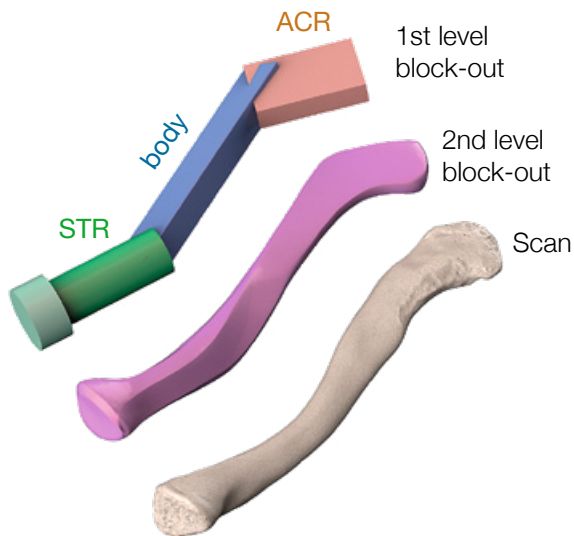
Front



STRUCTURE OF THE CLAVICLE

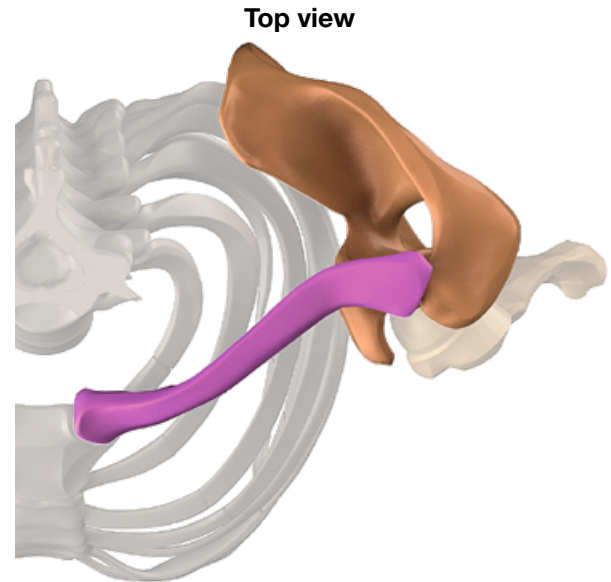
CLAVICLE SHAPE

The **sternal end (STR)** of the clavicle is more cylindrical, while the **acromial end (ACR)** is flatter and squarer, fitting into the flat acromial process of the scapula.

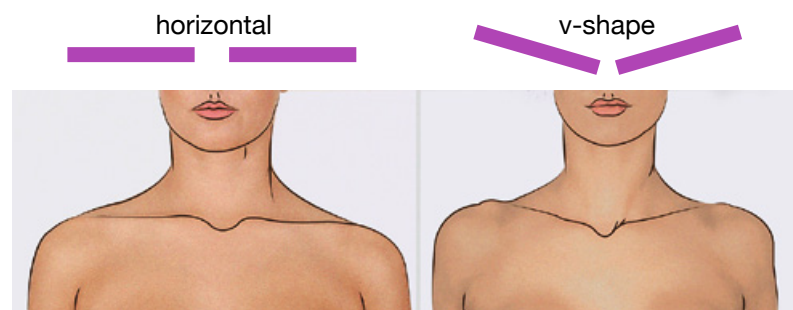
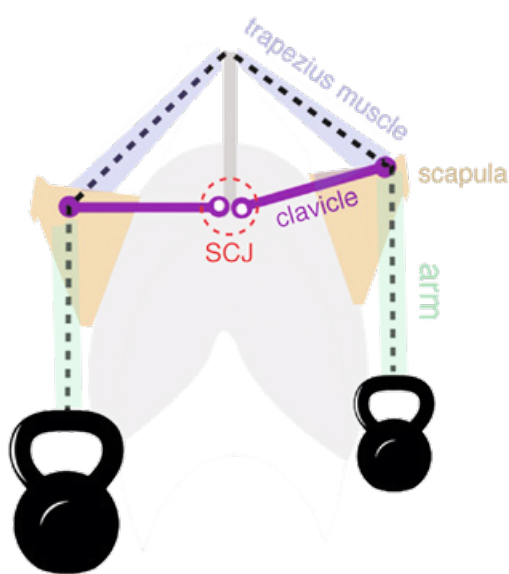


CLAVICULO-SCAPULAR CONNECTION

The **clavicle** has an S-shape and connects to the **scapula** at the acromion, wrapping slightly behind it.

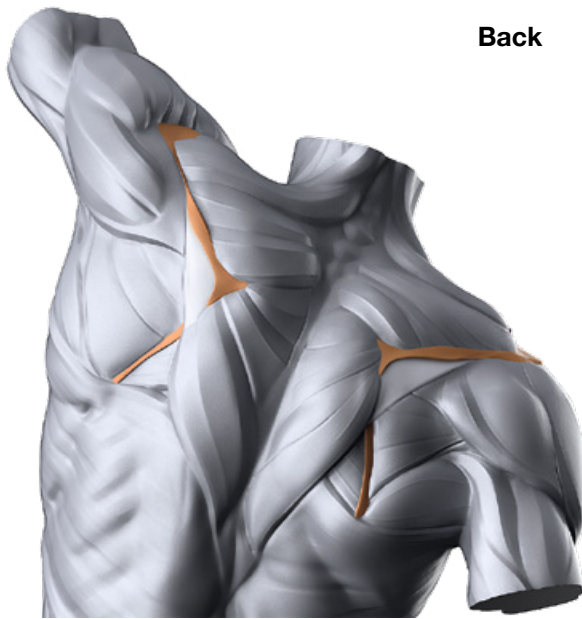


CLAVICULAR TILT ANGLE

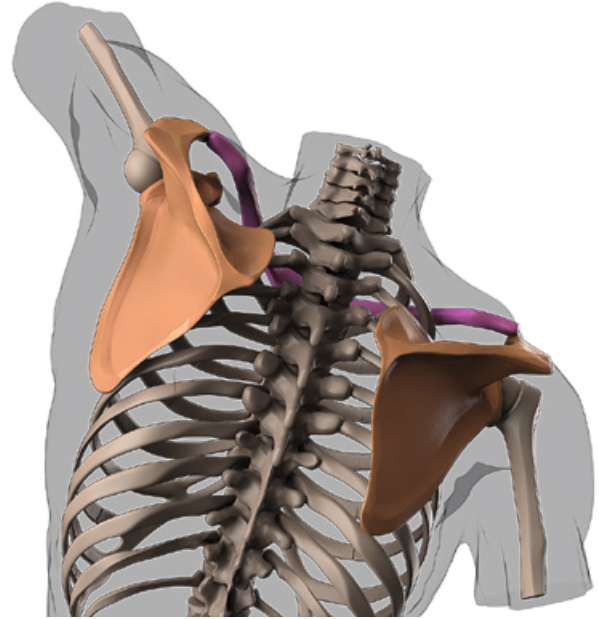


The clavicular tilt angle depends on the clavicle's highest point – the higher it is, the wider the angle against the horizontal plane. This point is influenced by shoulder height. In a relaxed pose, shoulder height depends on muscle development. Athletic builds often have lower shoulders, making the clavicular tilt angle more horizontal. Carried weight also affects the clavicular tilt. The shoulder girdle is a floating structure – it connects to the trunk only at the sternoclavicular joint (SCJ), located at the neck pit.

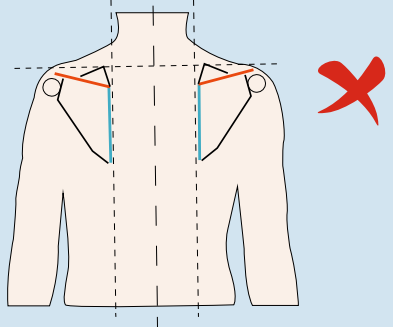
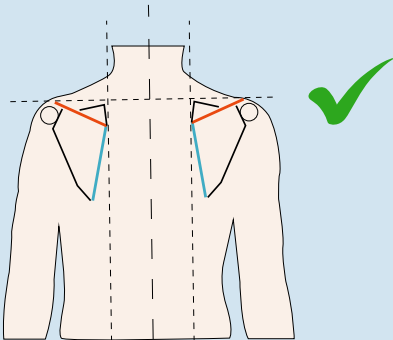
SHOULDER BLADE AND CLAVICLE IN CONTEXT



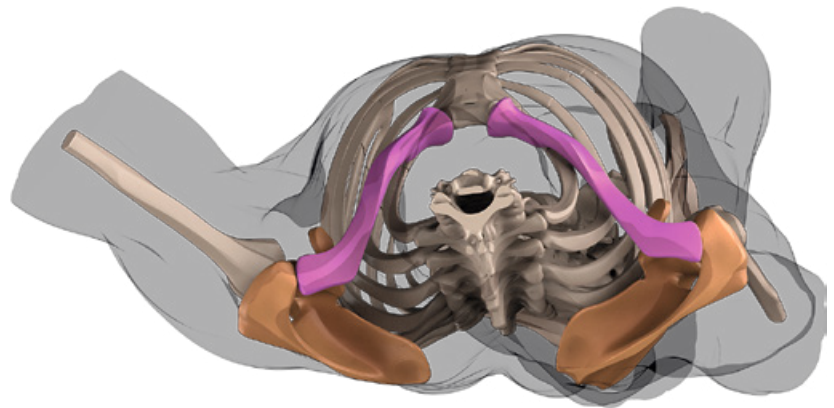
Back



With arms at rest, scapulae should sit at an angle, not parallel.



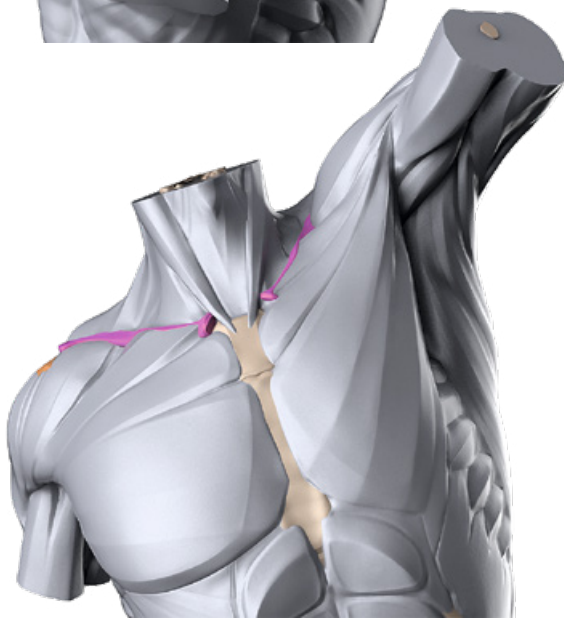
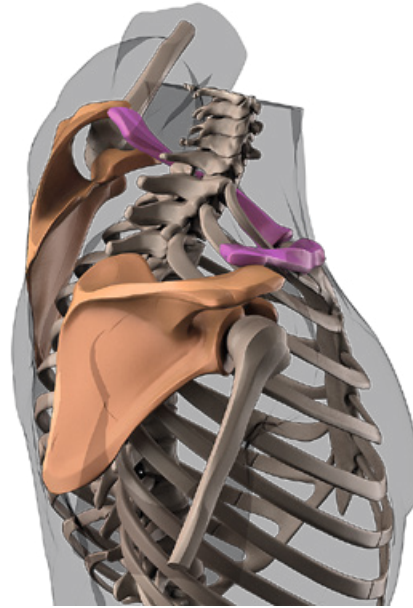
Top view



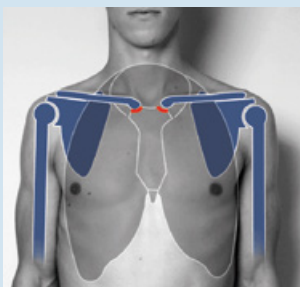
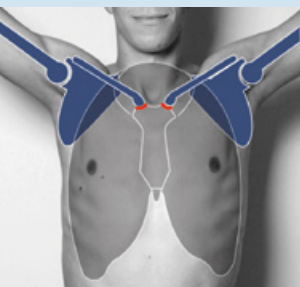
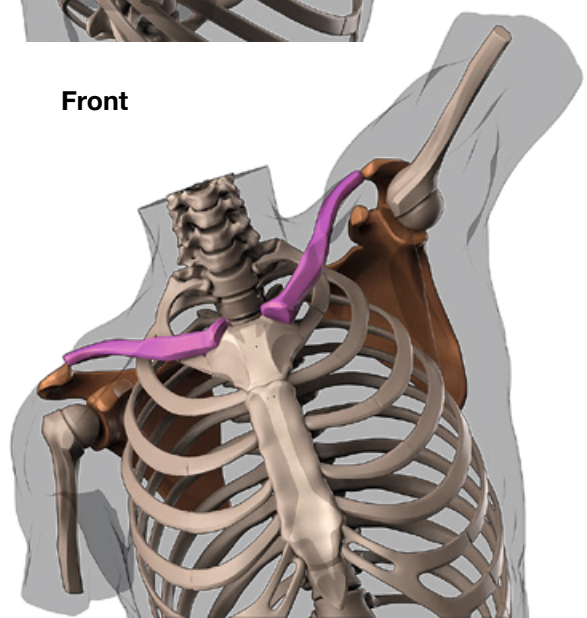
SHOULDER BLADE AND CLAVICLE IN CONTEXT



Lateral view



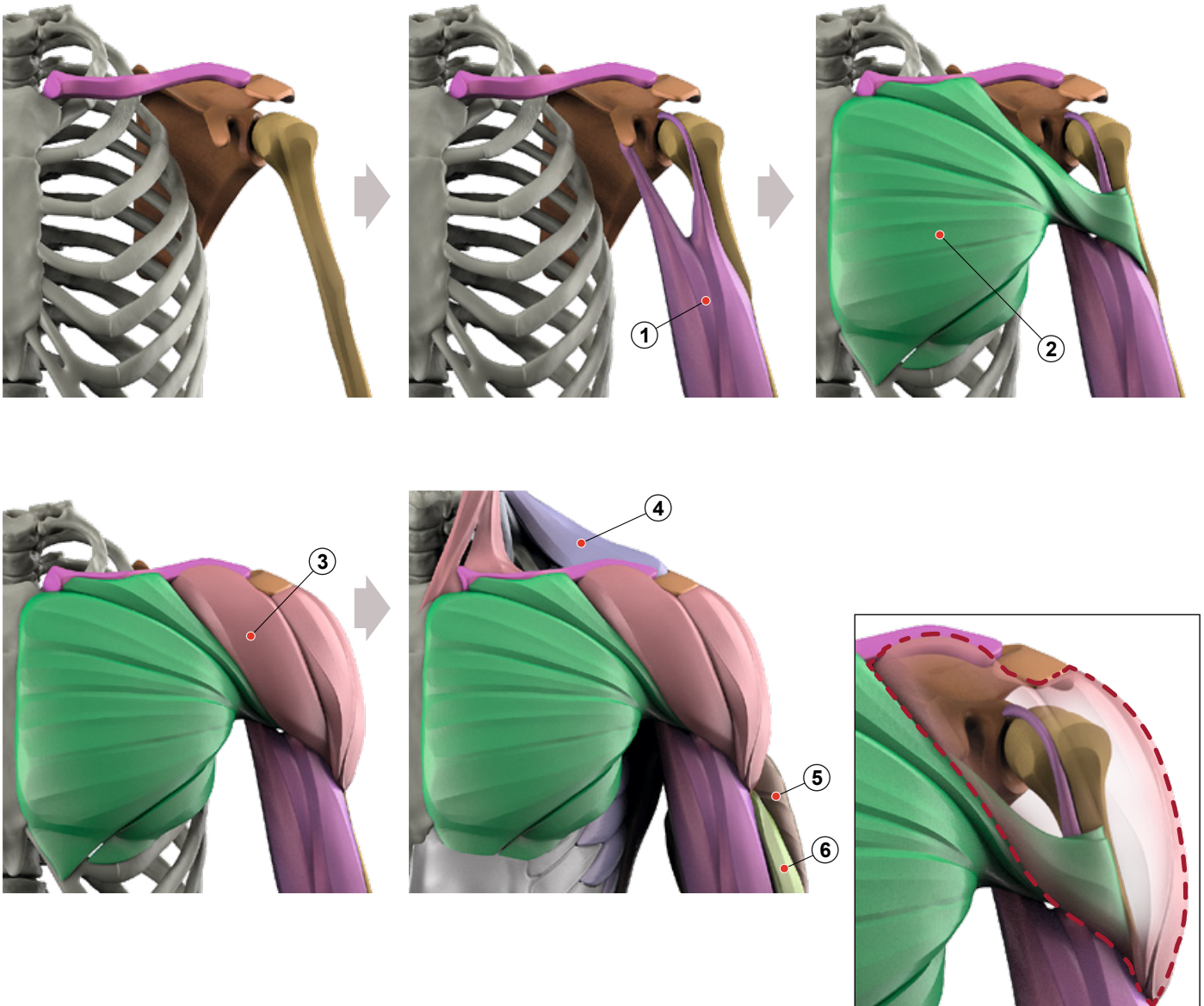
Front



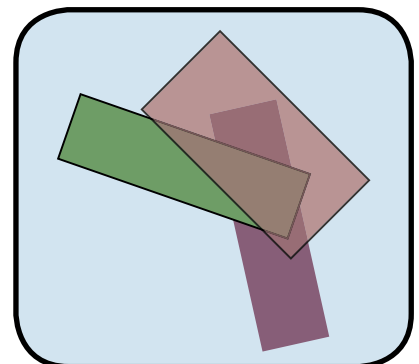
The only **bony connection** between the upper limb and the torso is where the clavicle meets the sternum.

ORDER OF MUSCLES

Front

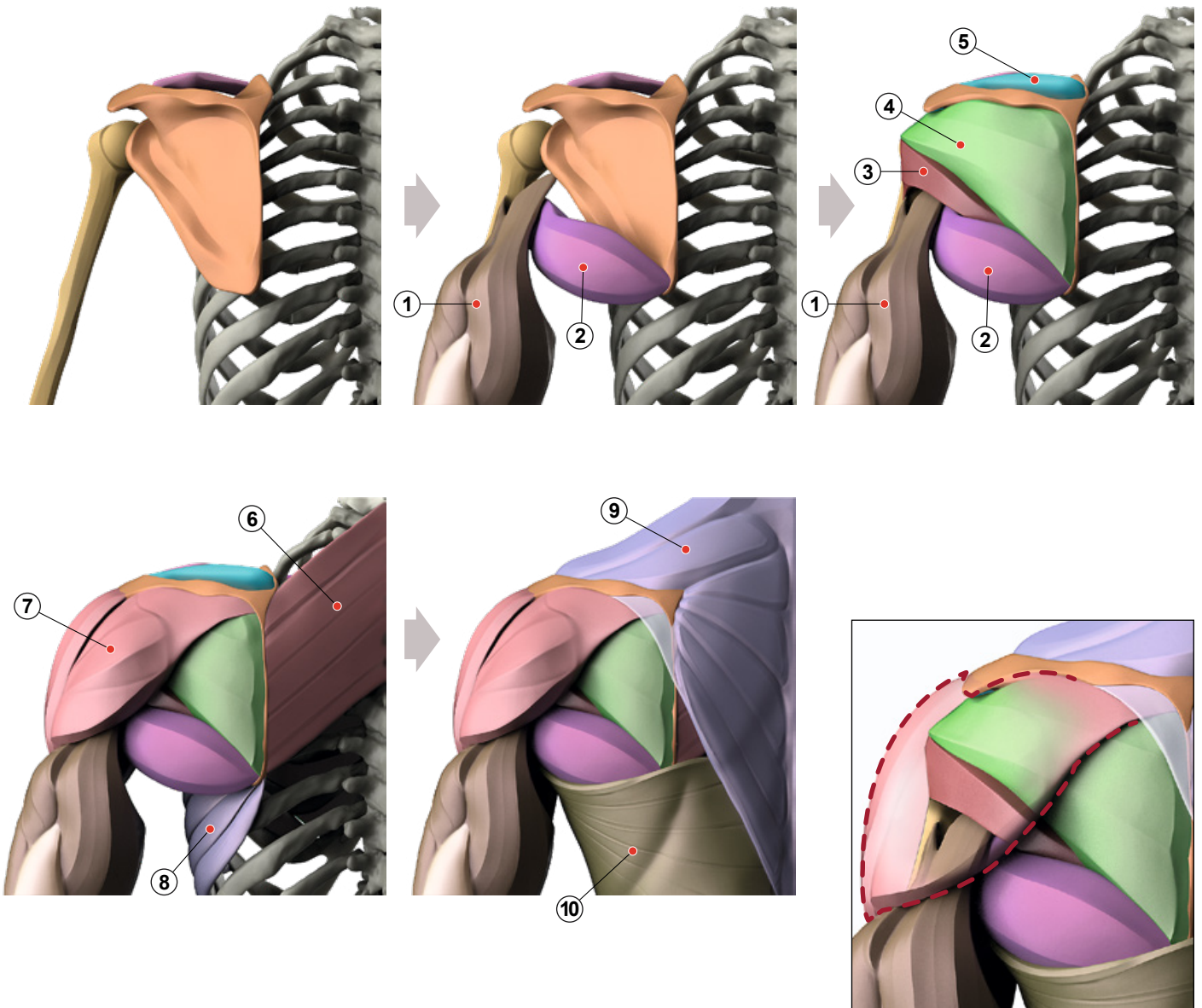


- | | |
|---|------------------|
| ① | Biceps brachii |
| ② | Pectoralis major |
| ③ | Deltoid |
| ④ | Trapezius |
| ⑤ | Triceps brachii |
| ⑥ | Brachialis |

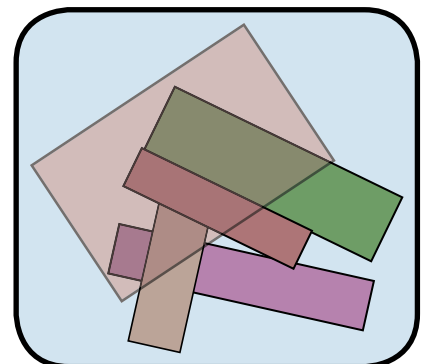


ORDER OF MUSCLES

Back



①	Triceps brachii	⑦	Deltoid
②	Teres major	⑧	Serratus anterior
③	Teres minor	⑨	Trapezius
④	Infraspinatus	⑩	Latissimus dorsi
⑤	Supraspinatus		
⑥	Rhomboid muscles		

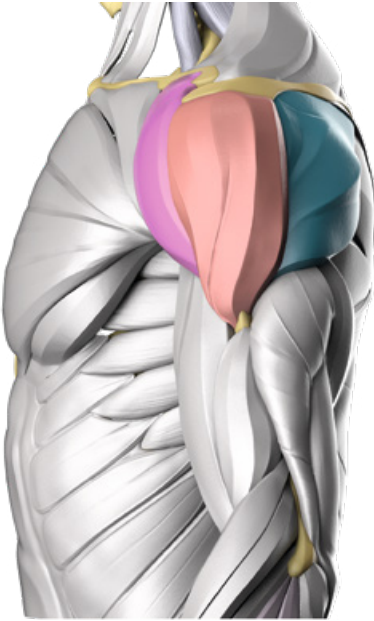


DELTOID MUSCLE

Back



Lateral view

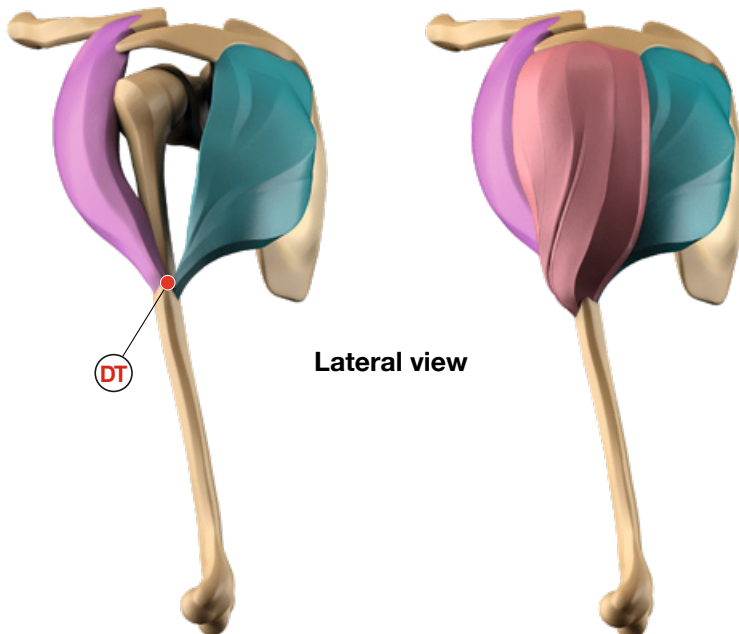
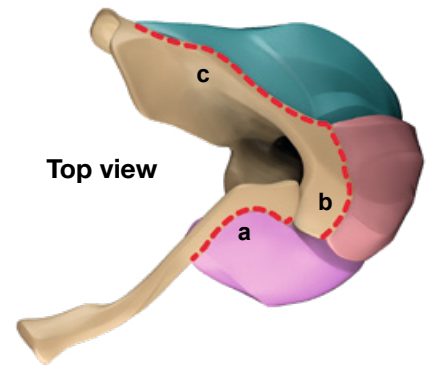


Front



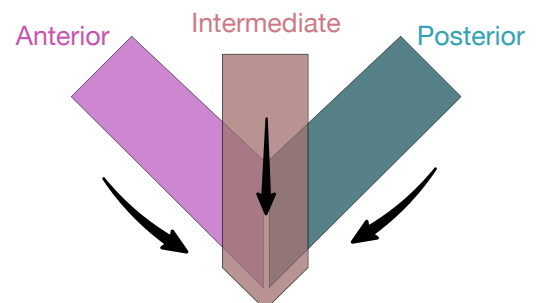
The deltoid muscle has three distinct parts: **anterior**, **intermediate**, and **posterior**. The **anterior** part originates from the lateral third of the clavicle (a), the **intermediate** from the acromion process of the scapula (b), and the **posterior** from the posterior border of the scapular spine (c).

Top view



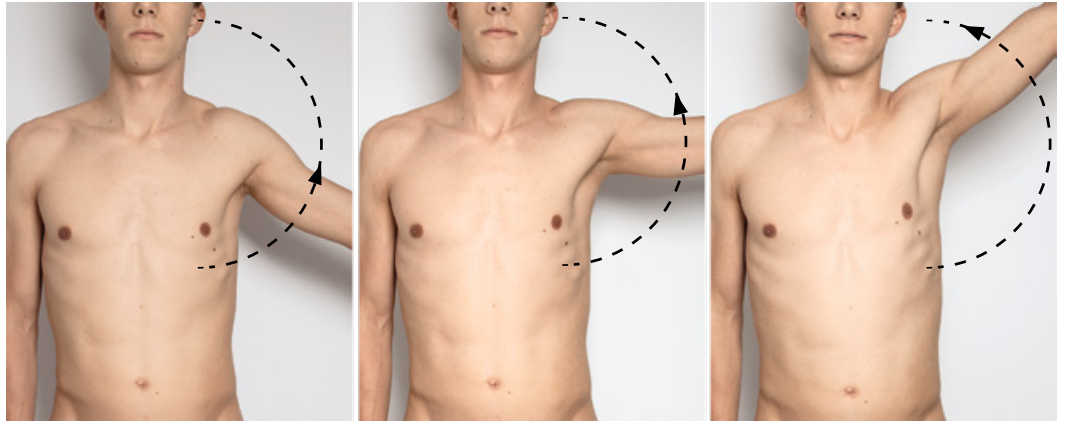
Lateral view

All three parts insert on the **deltoid tuberosity (DT)** of the humerus. The **anterior** and **posterior** parts of the muscle slide under its **intermediate** part.

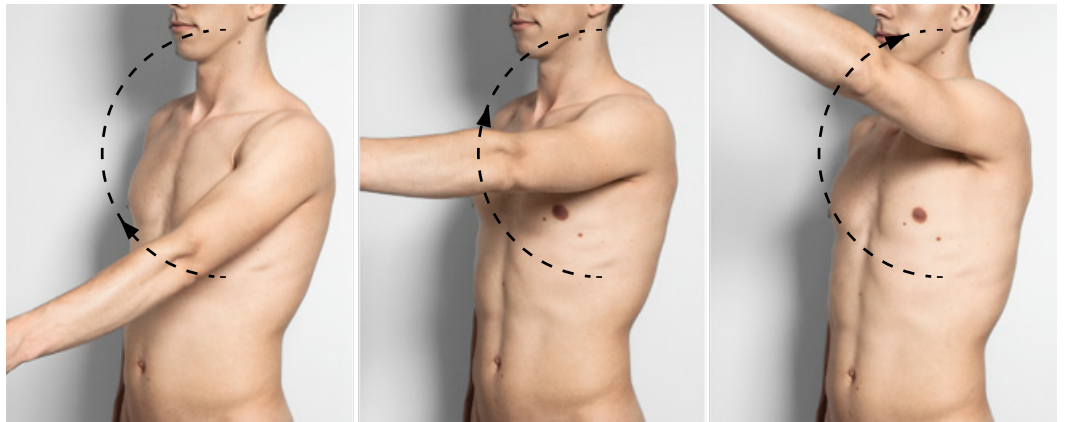


DELTOID PARTS AND MOVEMENT

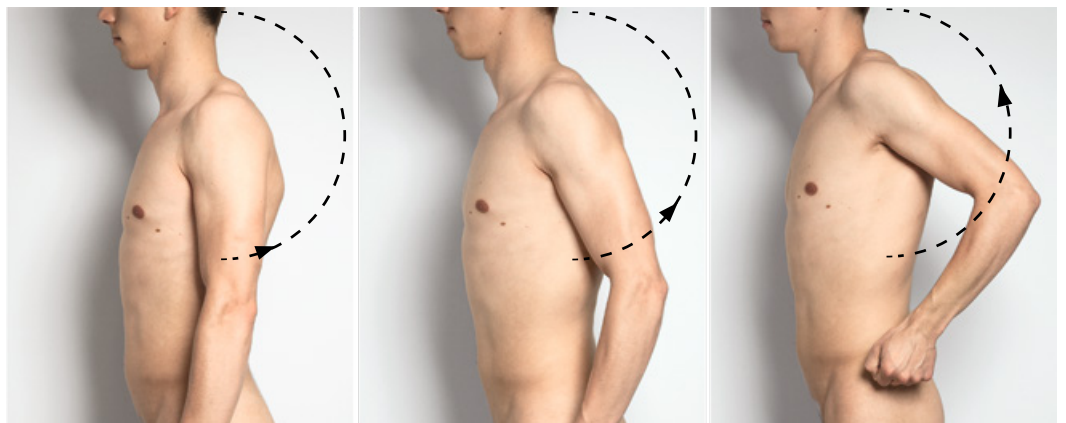
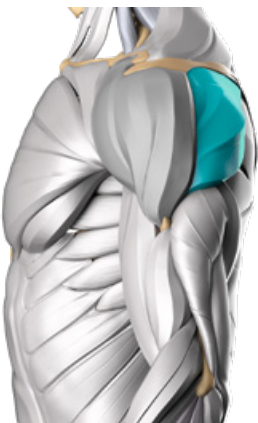
Intermediate part (abducting the arm)



Anterior part (moving the arm forward)



Posterior part (moving the arm backward)



SHOULDER MOVEMENTS

Pose catalogue

Female poses

Neutral



FX
p. 96



FB
p. 82



Neutral



Male poses

Neutral



MX
p. 88



MB
p. 76



Neutral



MF
p. 68

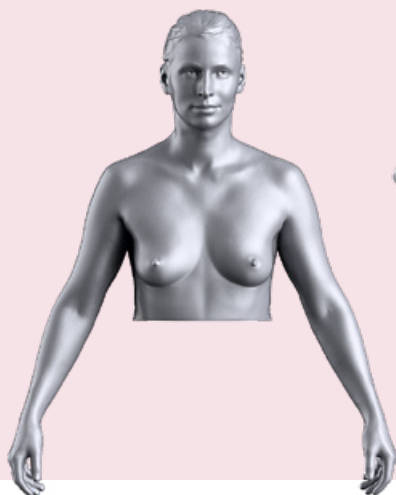
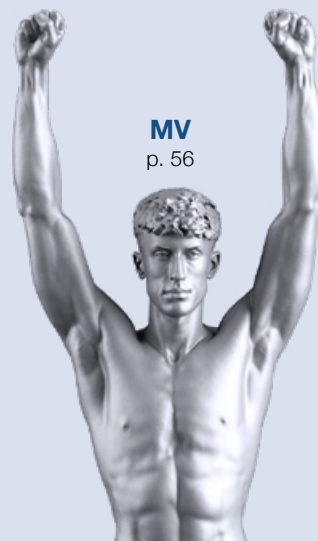


MTT
p. 32



SHOULDER MOVEMENTS

Pose catalogue

Neutral**FT**
p. 50**FV**
p. 62**Neutral****MT**
p. 44**MV**
p. 56**MZ**
p. 104**MA**
p. 38

MTT – T-pose

Multi-angle view



Skin



MTT – T-pose

Multi-angle view

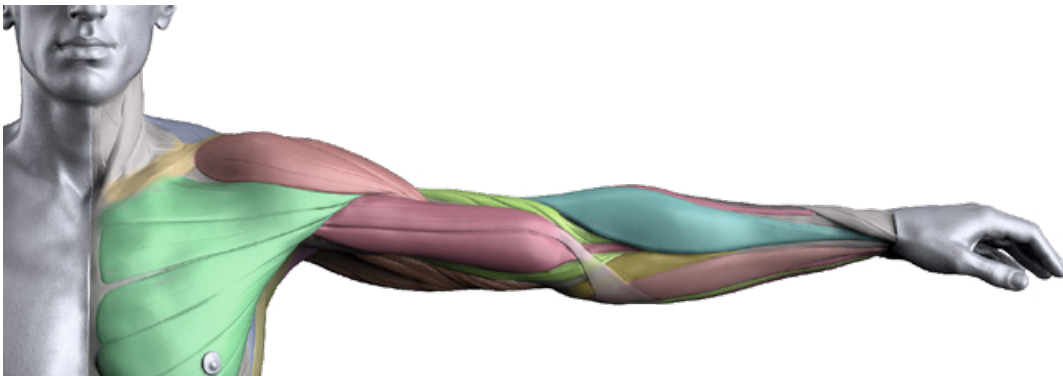
**Skin**

MTT – T-pose

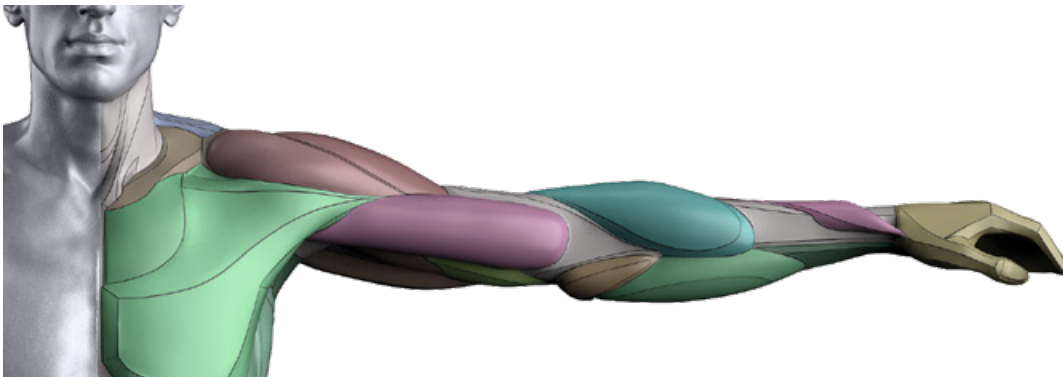
Front



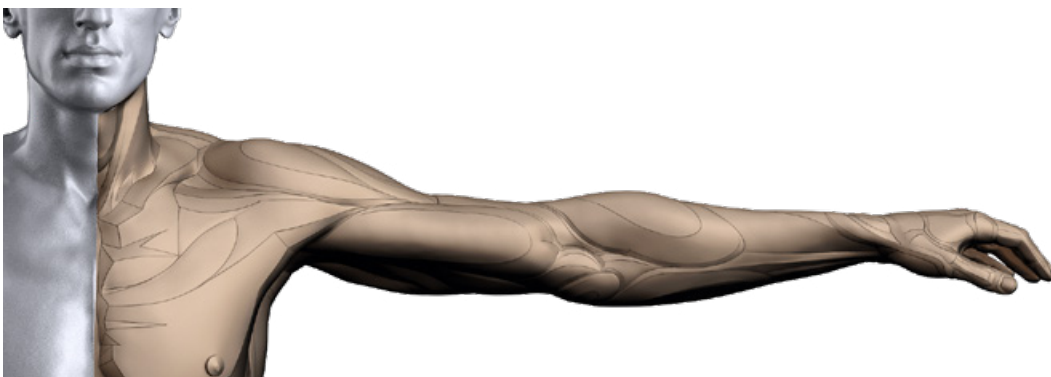
Skin



Muscles



1st level block-out

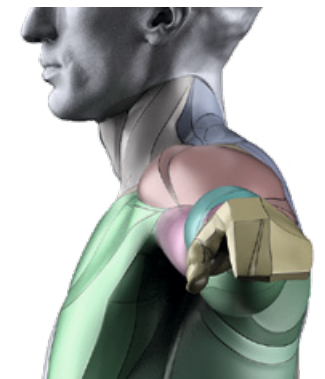
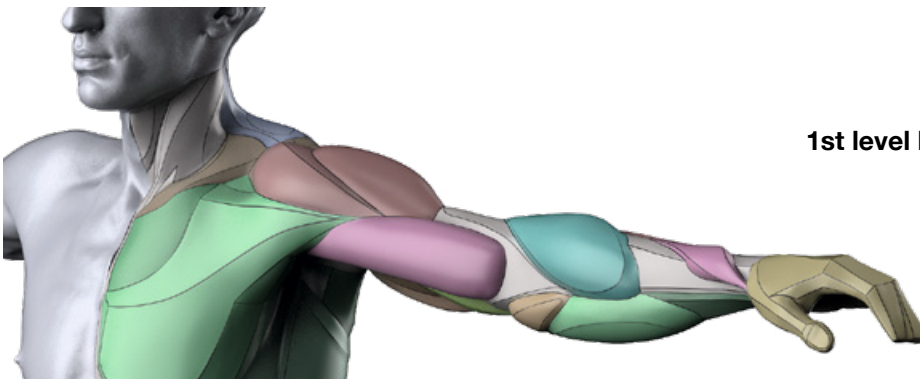


2nd level block-out

MTT – T-pose

Front-side

Lateral view

**Skin****Muscles****1st level block-out****2nd level block-out**

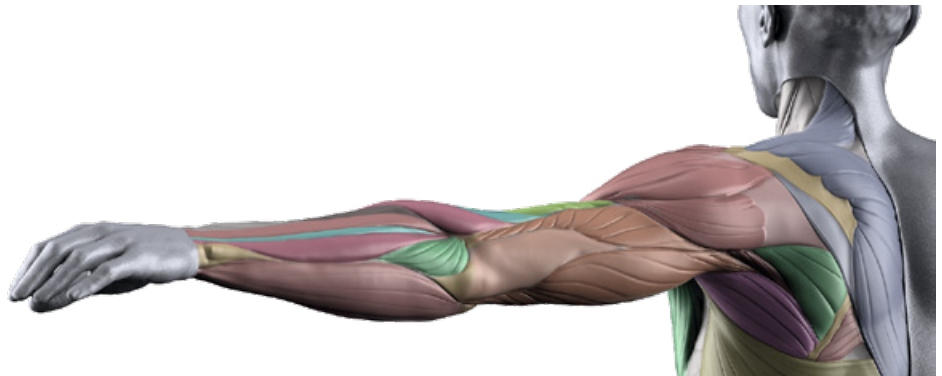
MTT – T-pose

Back-side

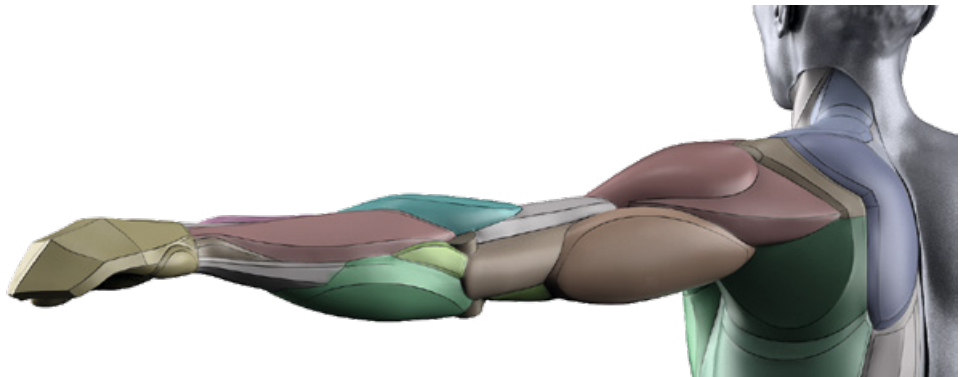
Skin



Muscles



1st level block-out



2nd level block-out



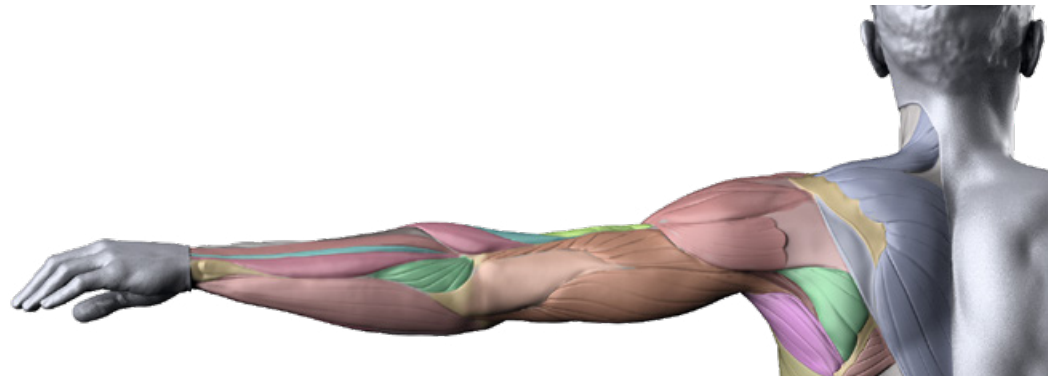
MTT – T-pose

Back

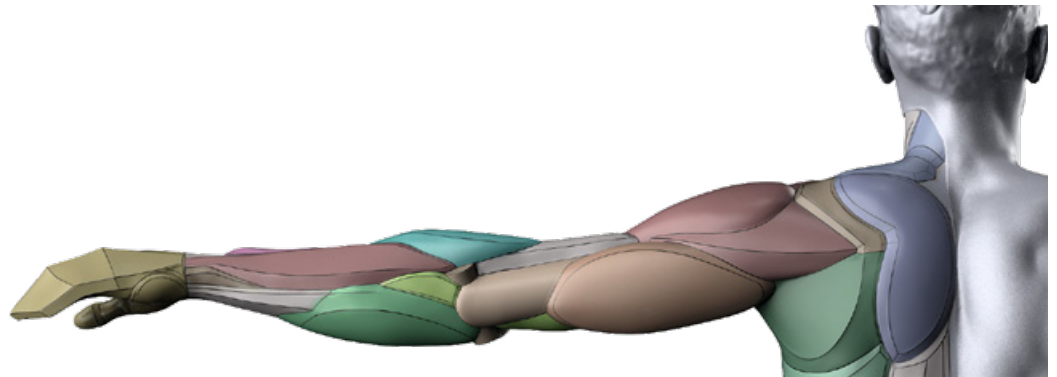
Skin



Muscles



1st level block-out



2nd level block-out



MA – A-pose

Multi-angle

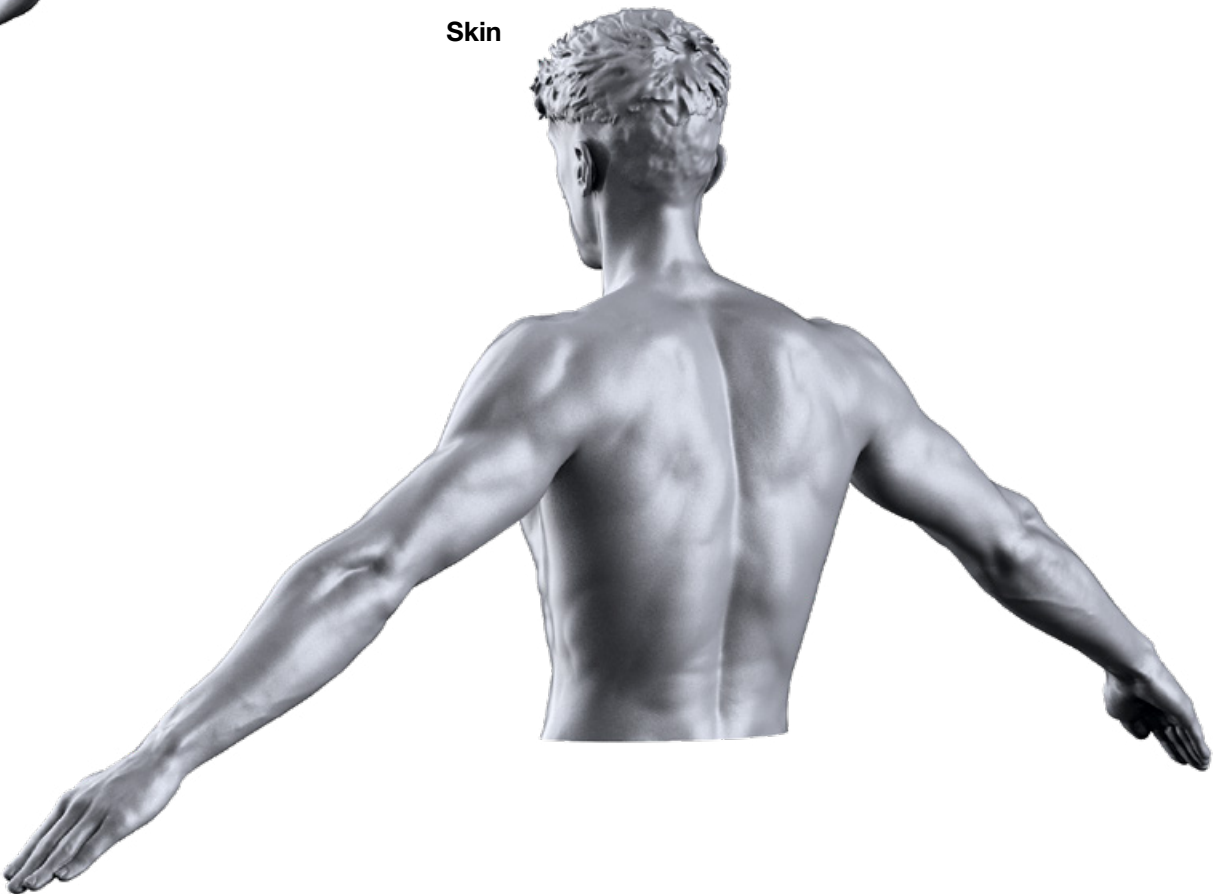


Skin



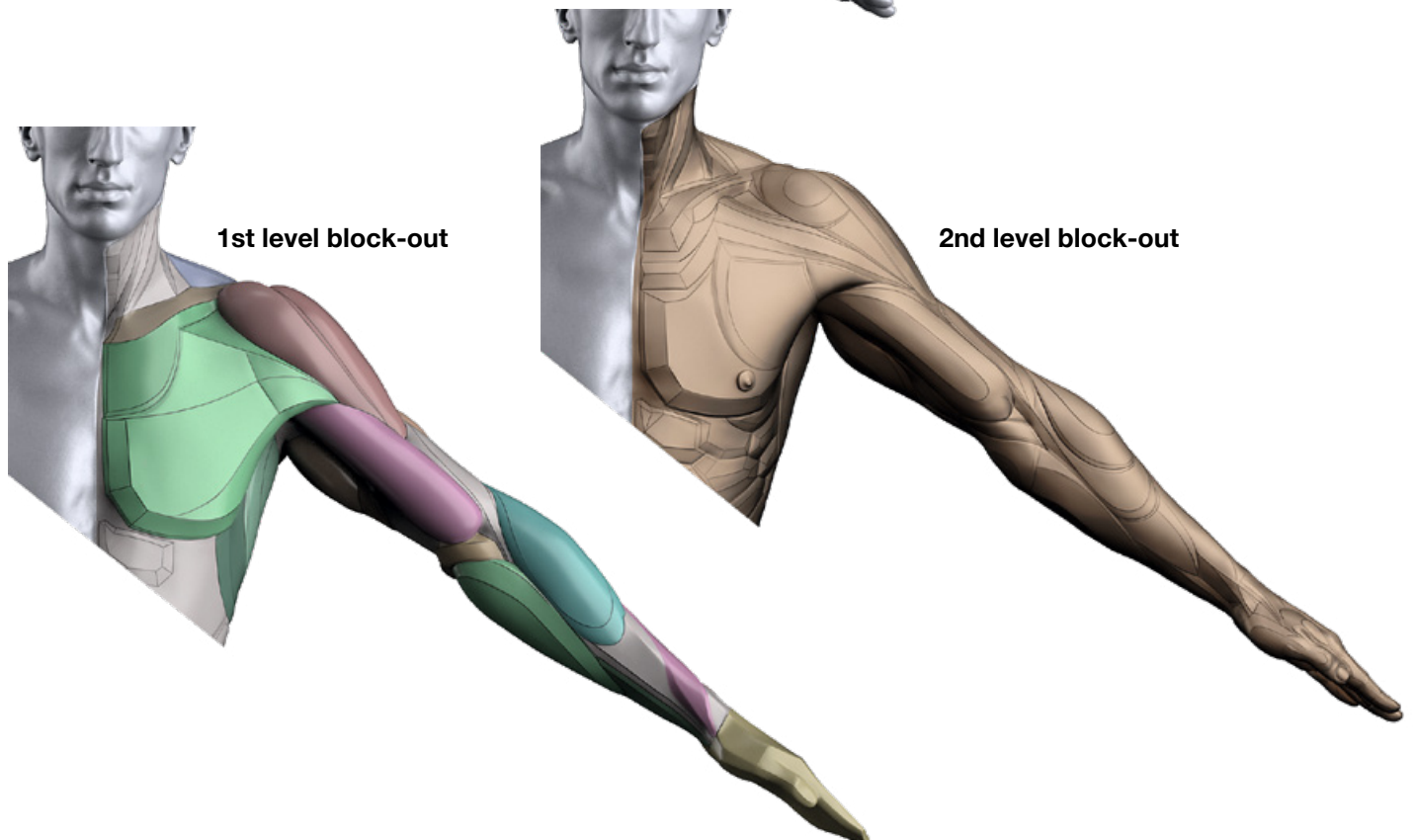
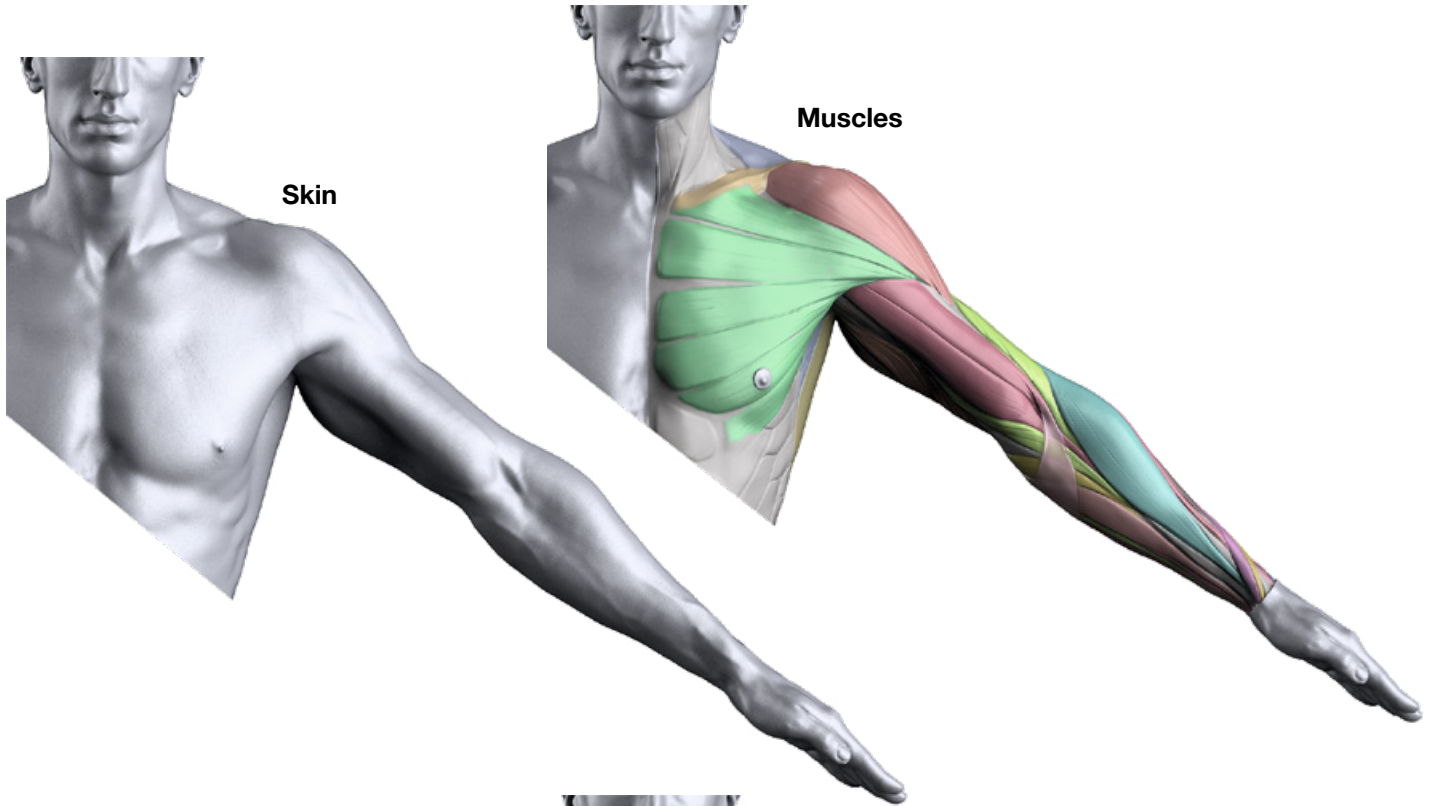
MA – A-pose

Multi-angle

**Skin**

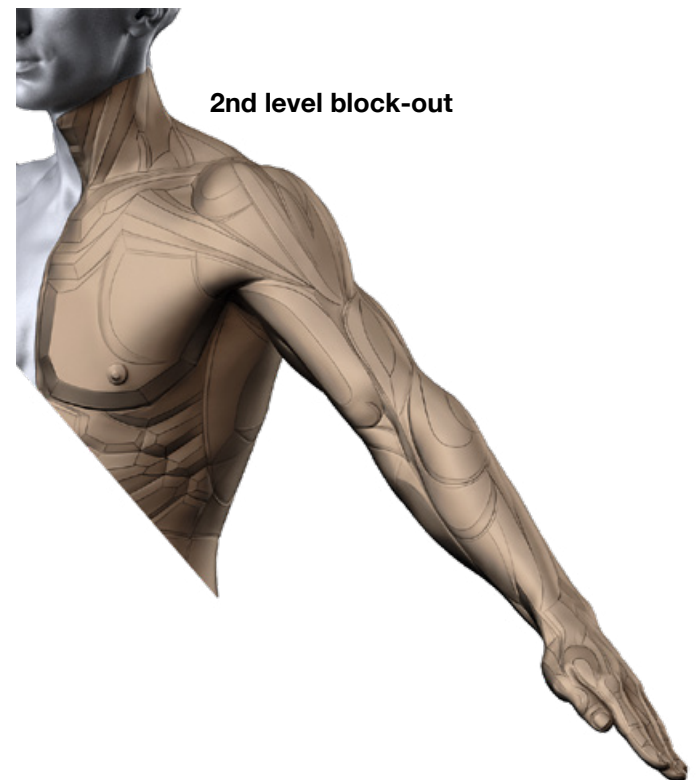
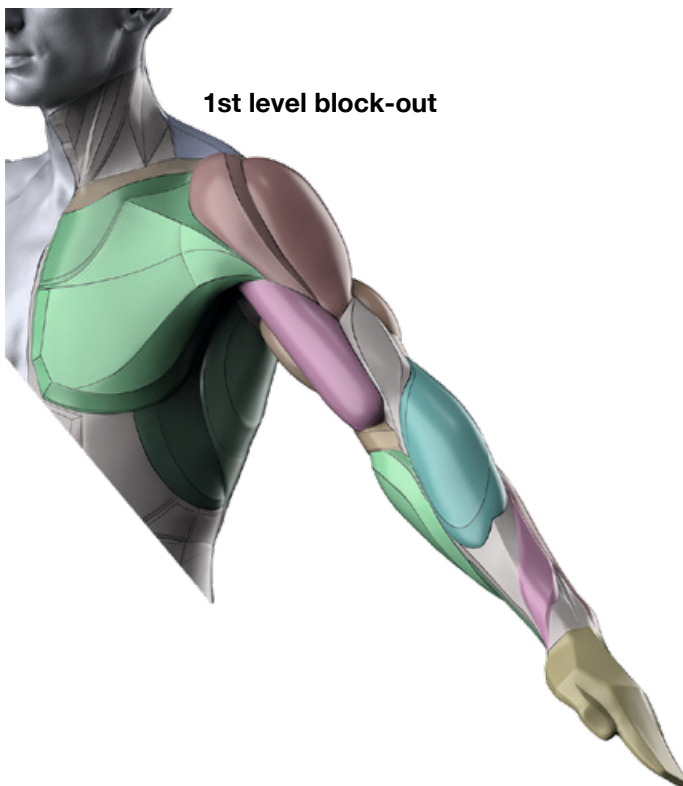
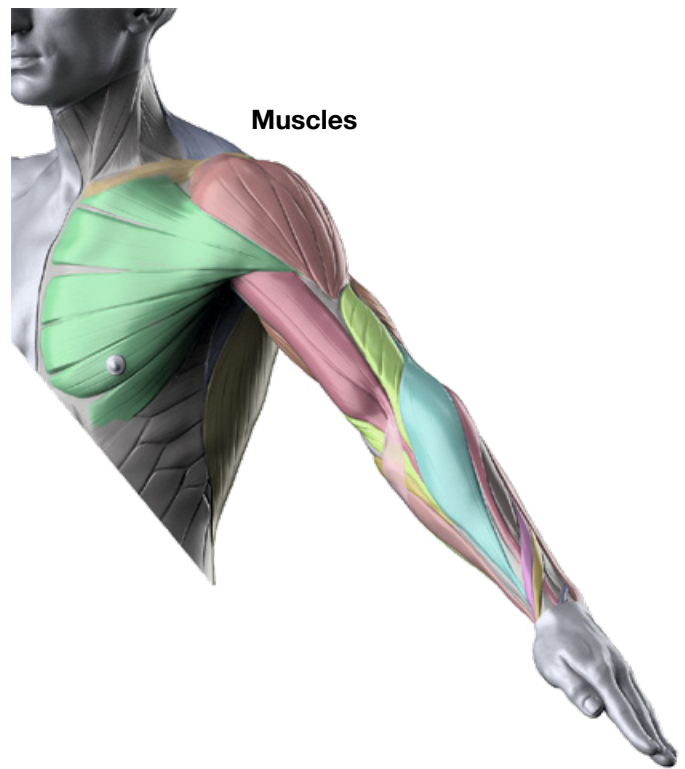
MA – A-pose

Front



MA – A-pose

Front-side



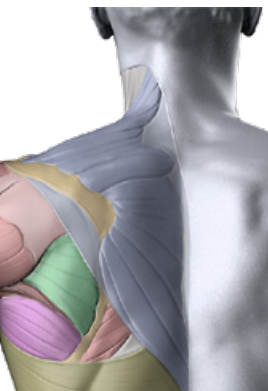
MA – A-pose

Back

Skin



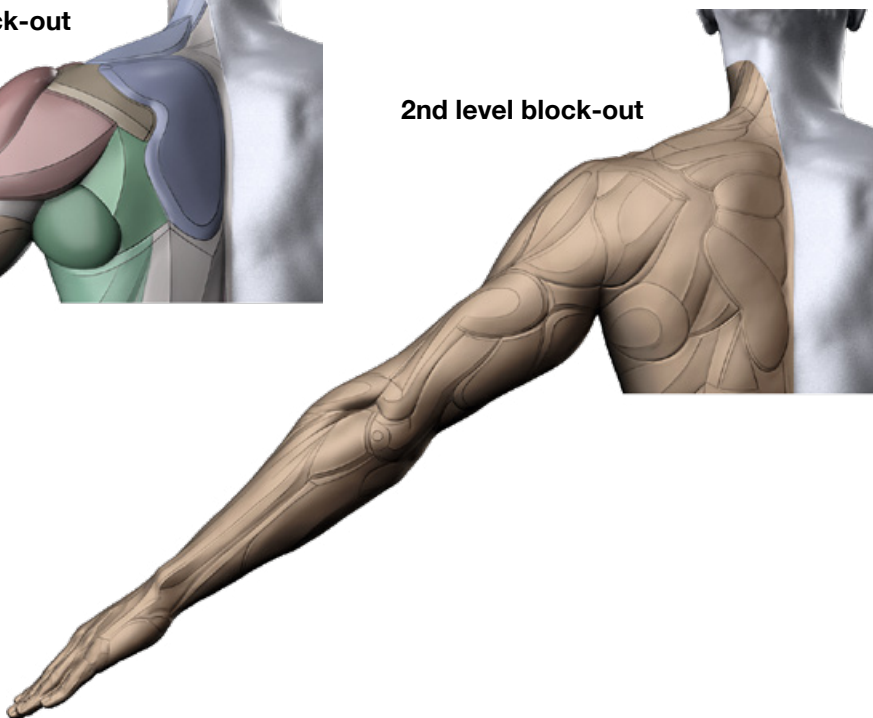
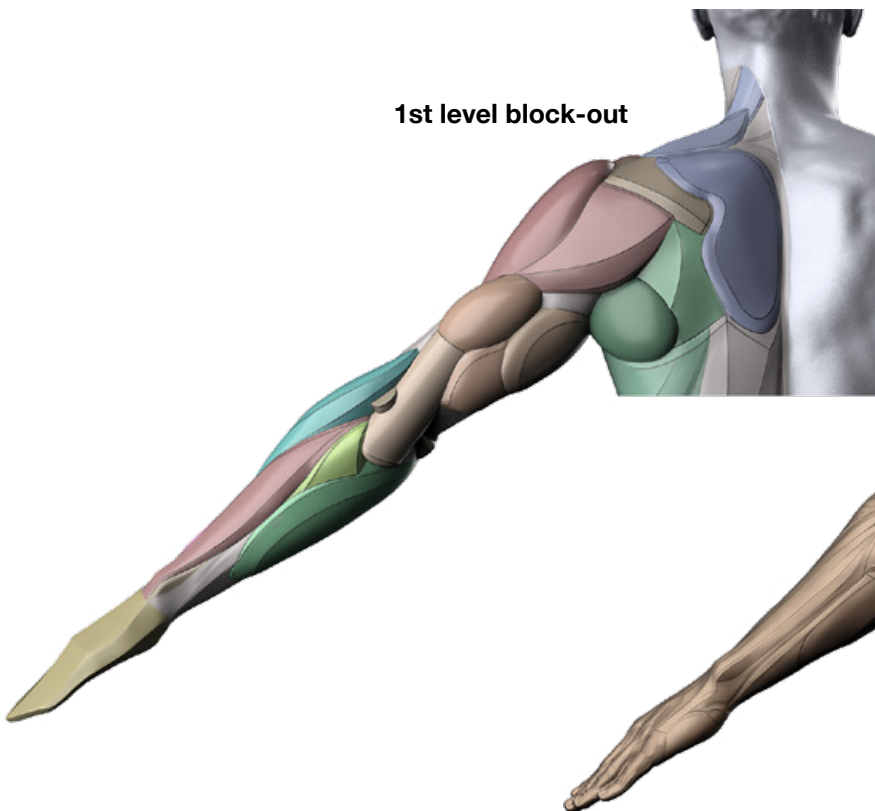
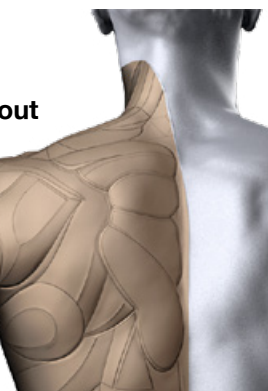
Muscles



1st level block-out

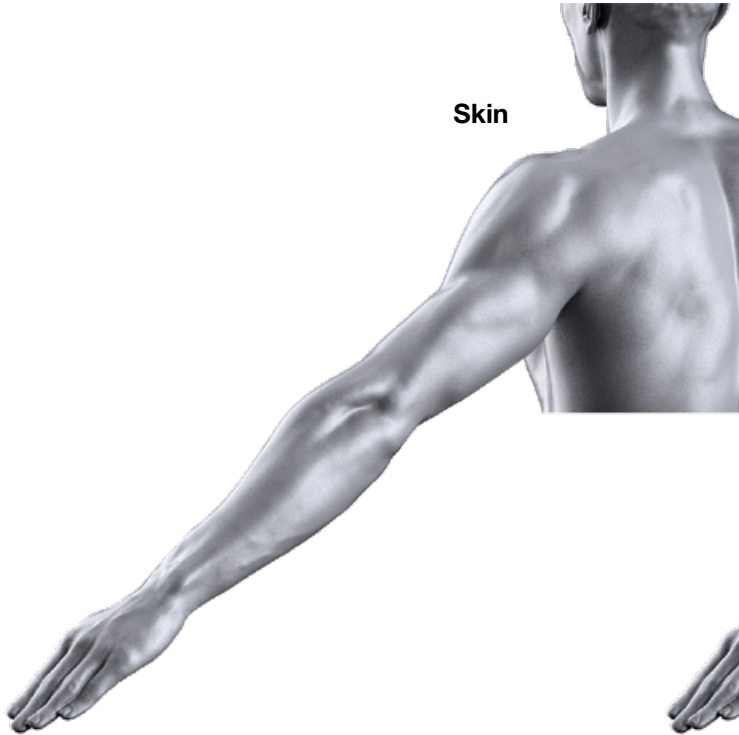
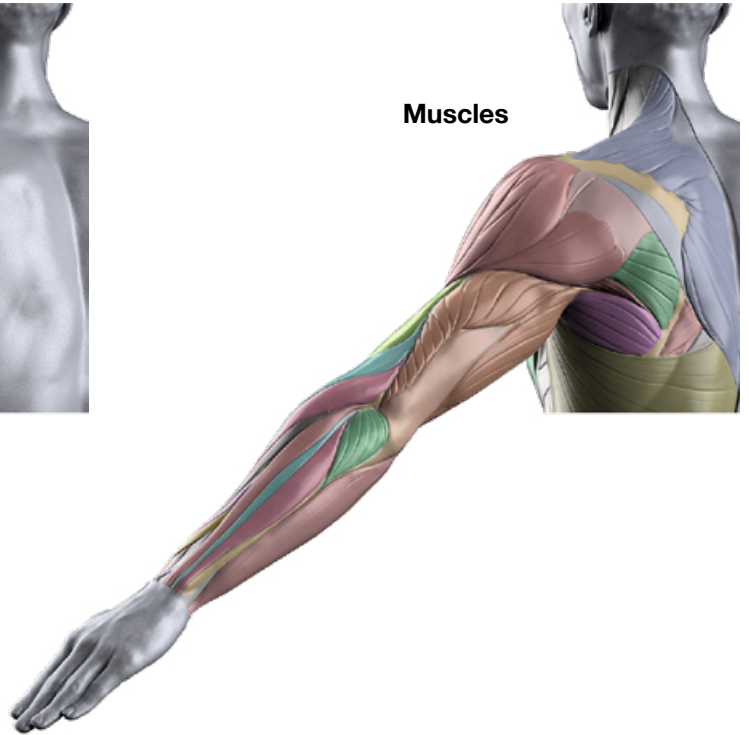
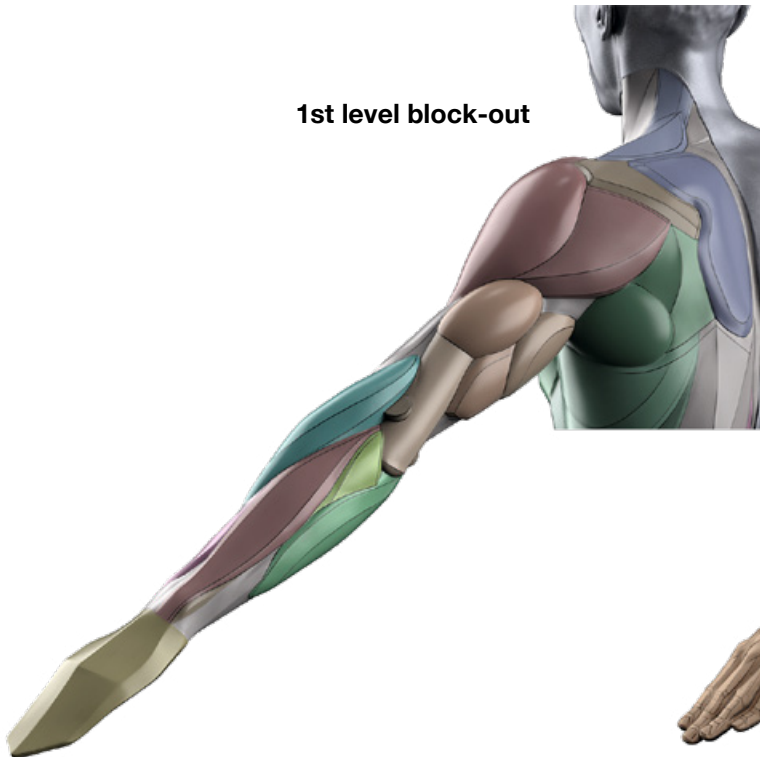
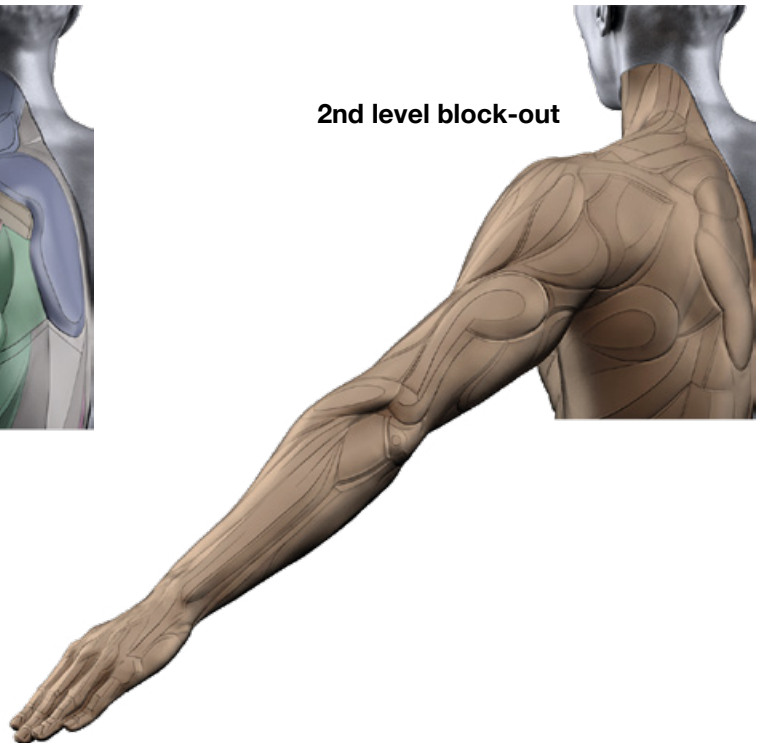


2nd level block-out



MA – A-pose

Back-side

Skin**Muscles****1st level block-out****2nd level block-out**

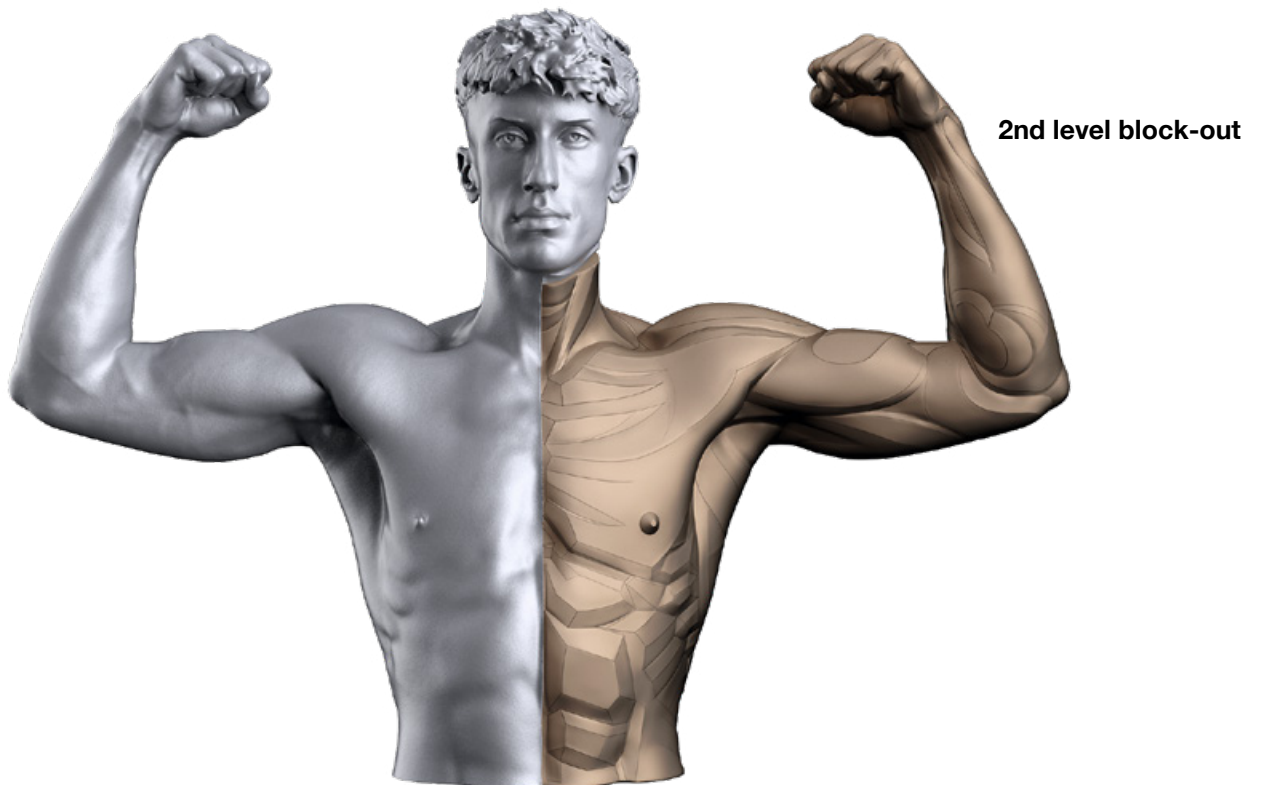
MT – Flex pose

Front



MT – Flex pose

Front



MT – Flex pose

Back



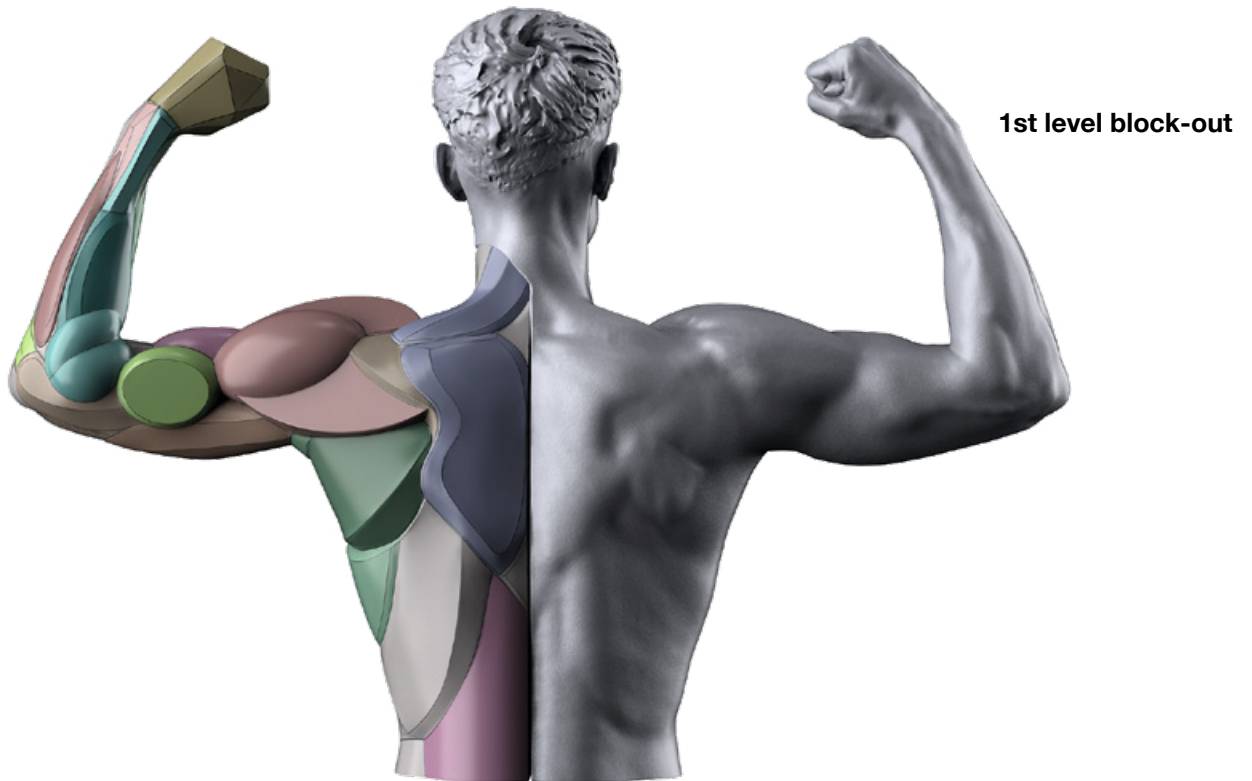
Skin



Muscles

MT – Flex pose

Back



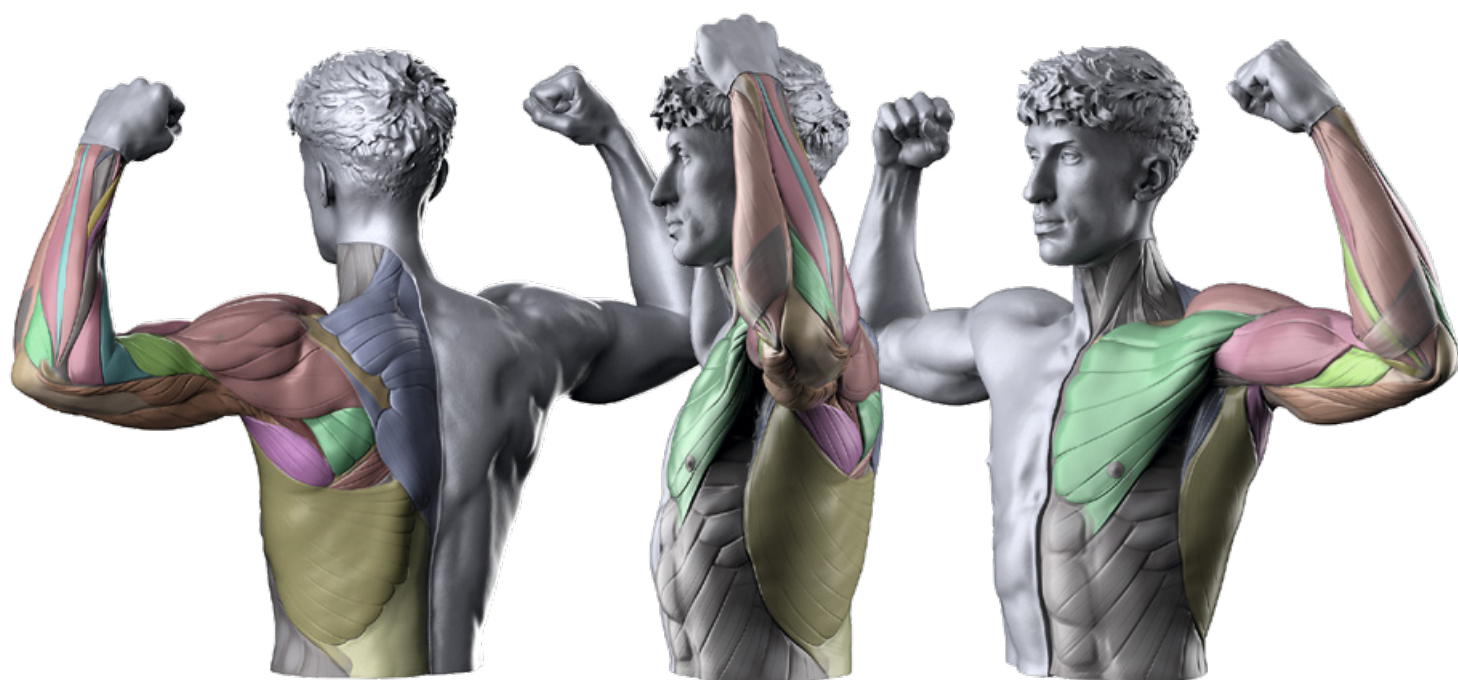
MT – Flex pose

Multi-angle

Skin



Muscles



MT – Flex pose

Multi-angle

1st level block-out

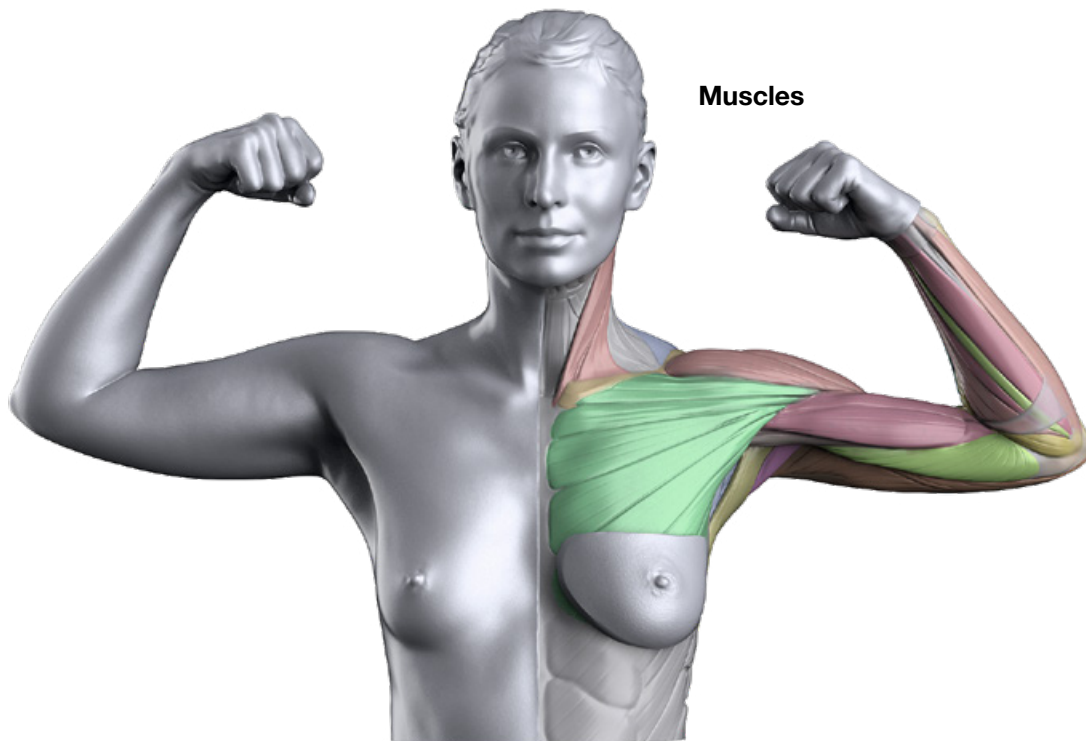


2nd level block-out



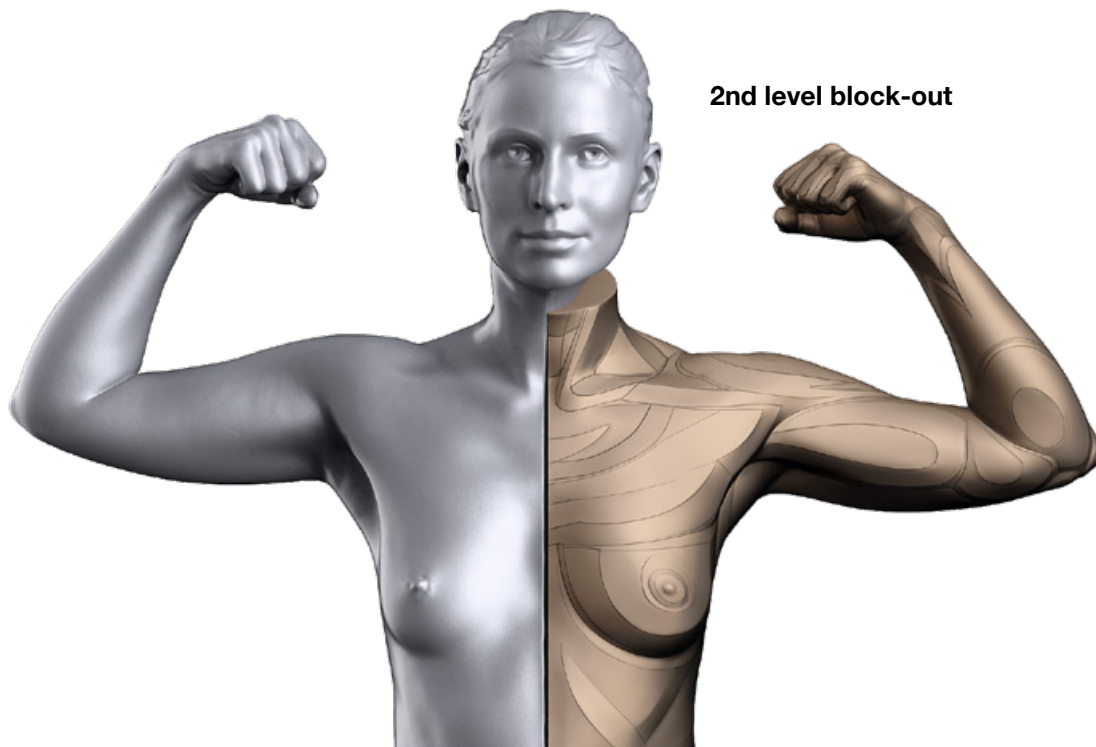
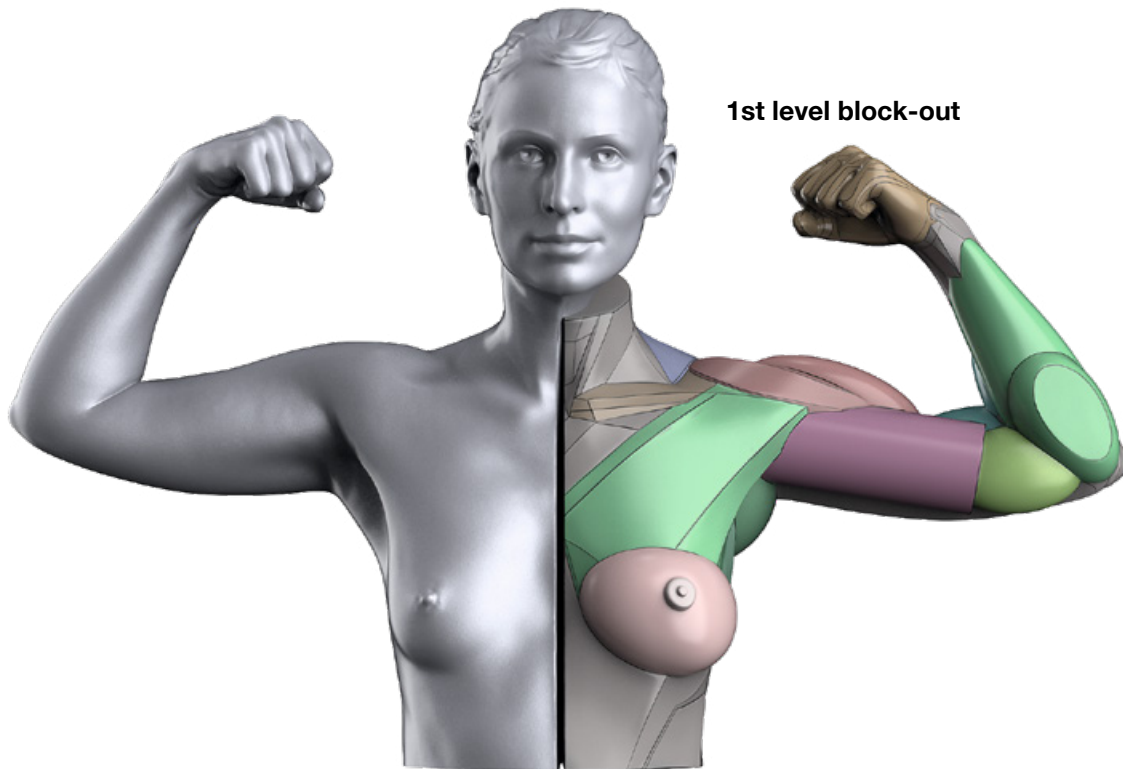
FT – Flex pose

Front



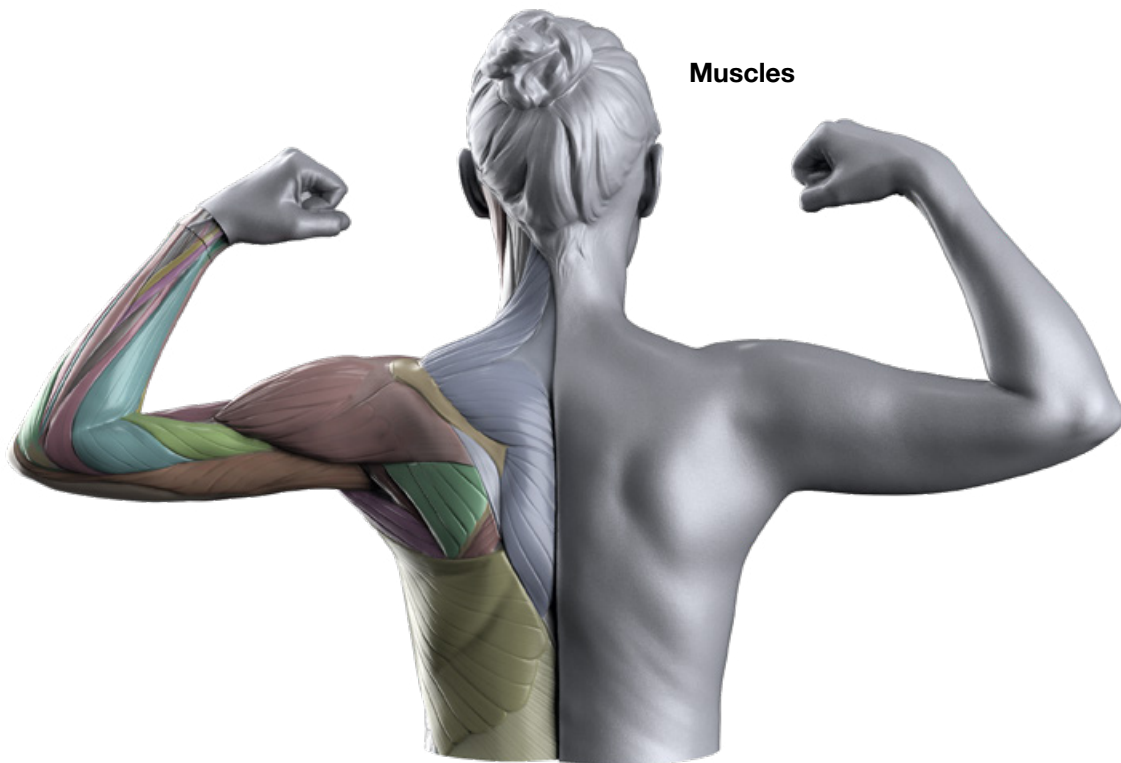
FT – Flex pose

Front



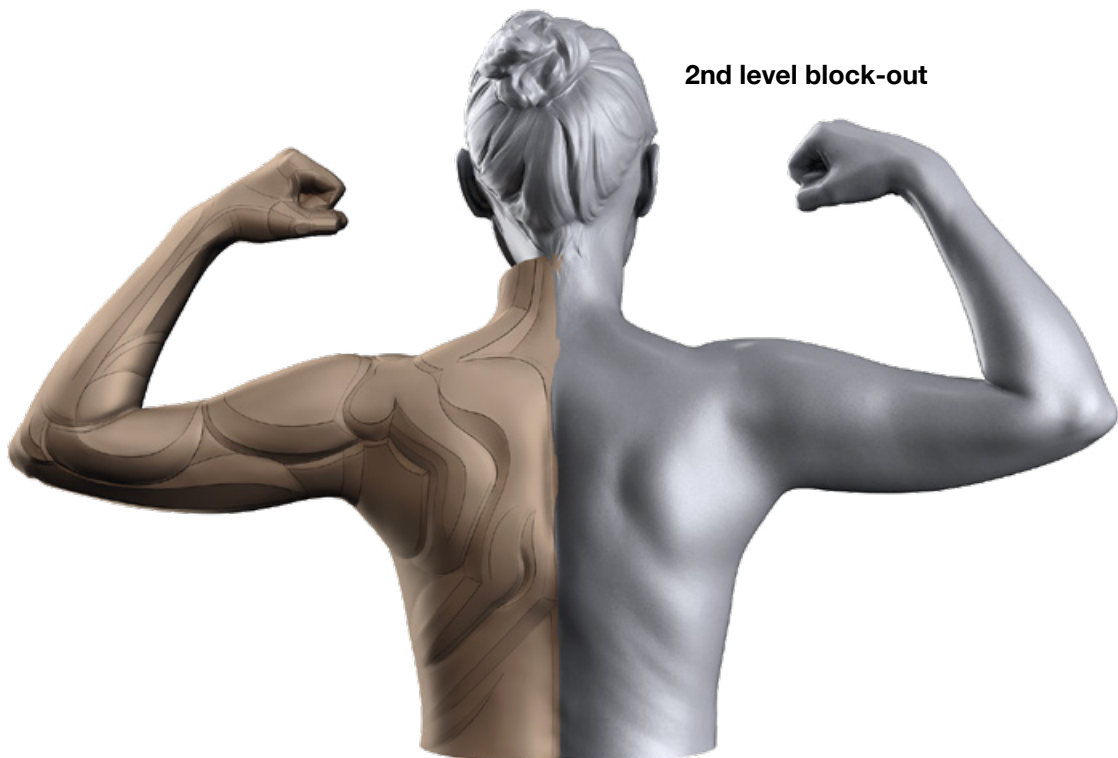
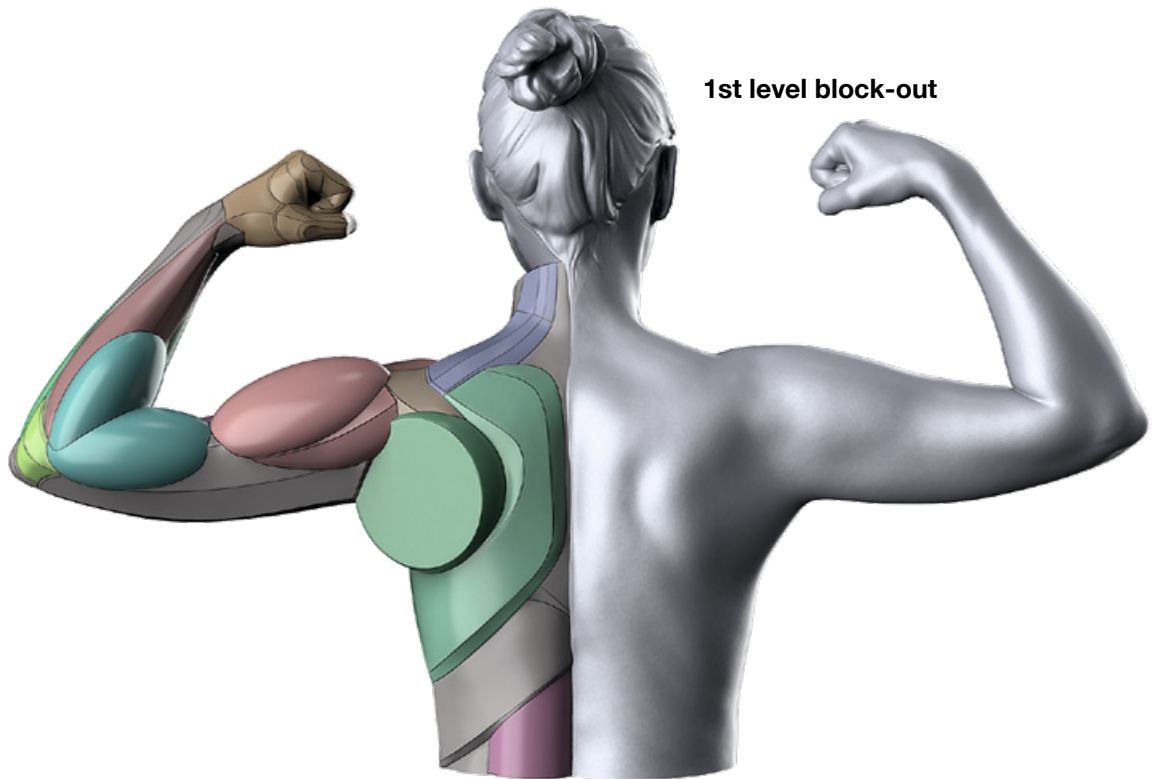
FT – Flex pose

Back



FT – Flex pose

Back



FT – Flex pose

Multi-angle

Skin

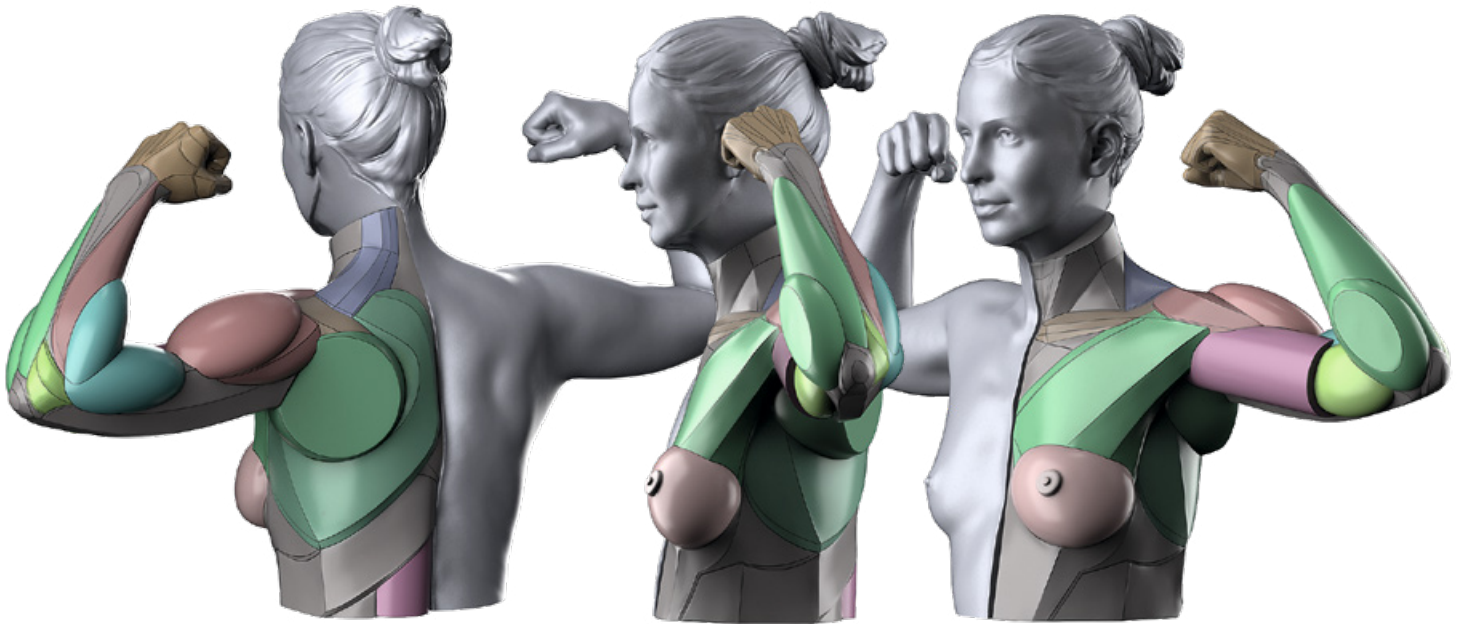
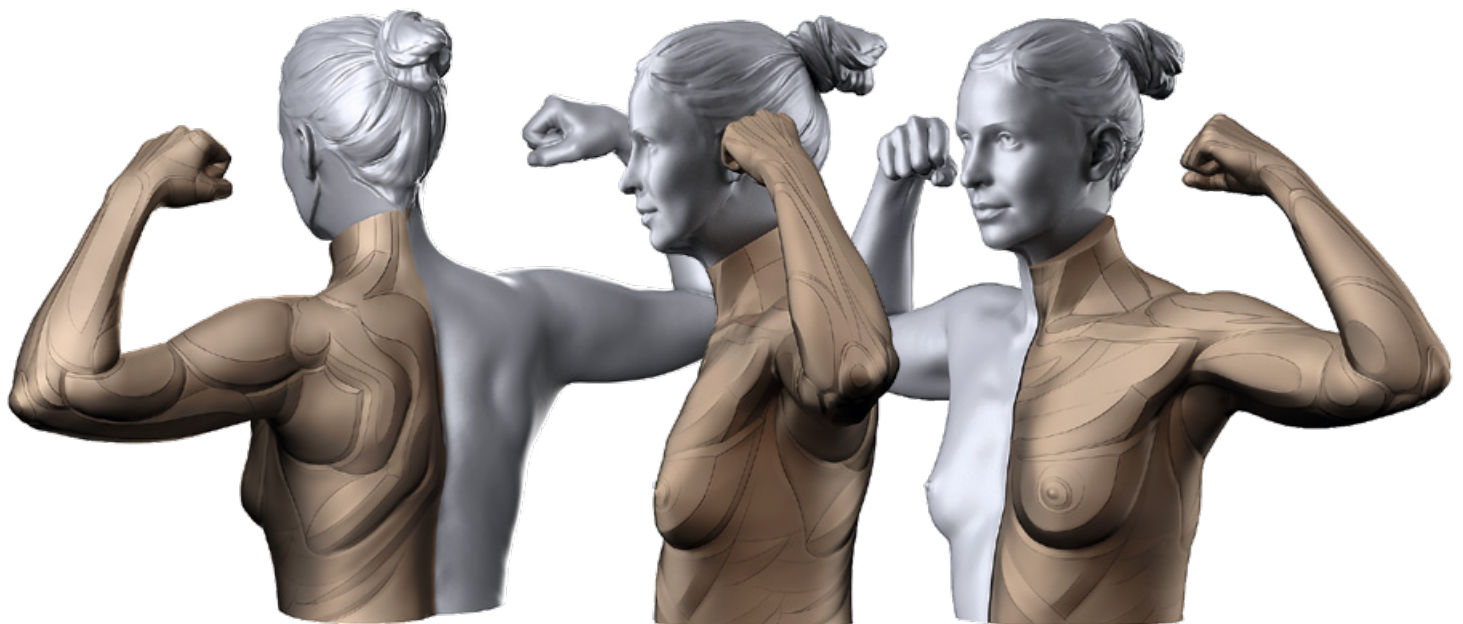


Muscles



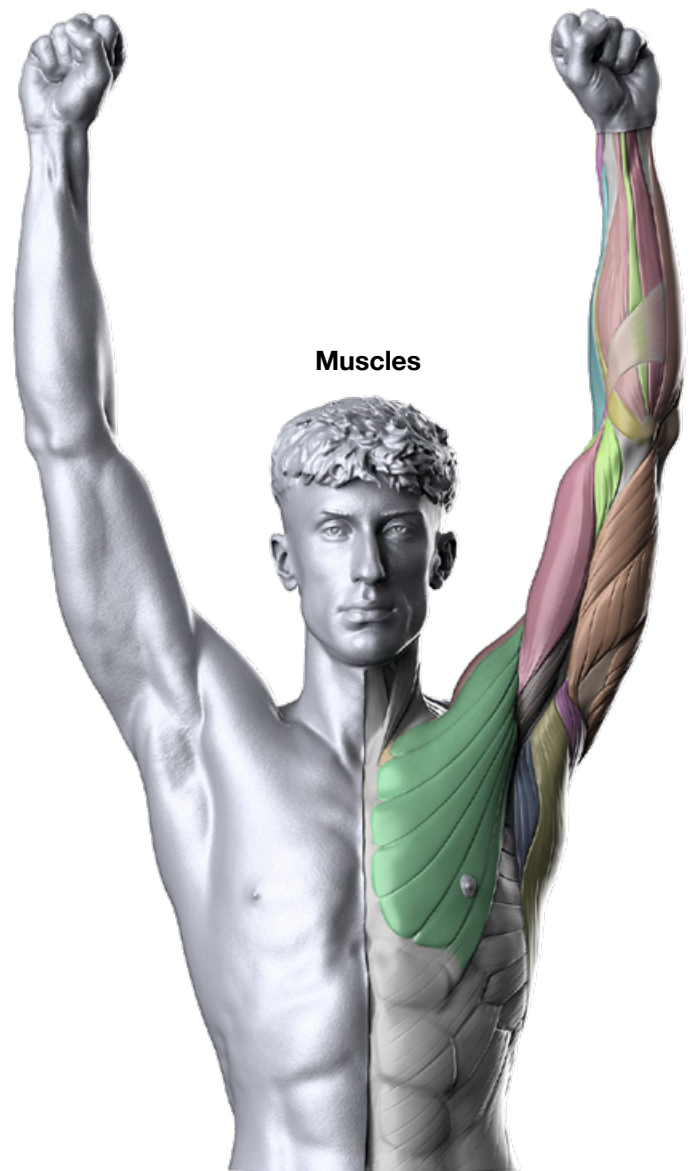
FT – Flex pose

Multi-angle

1st level block-out**2nd level block-out**

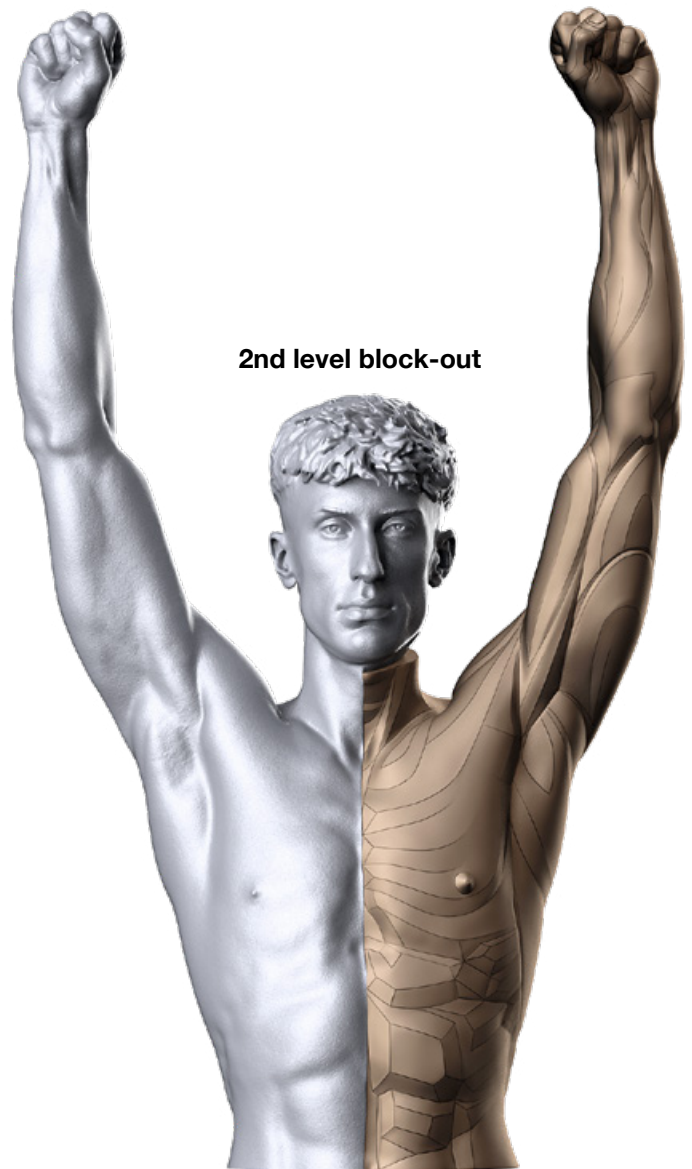
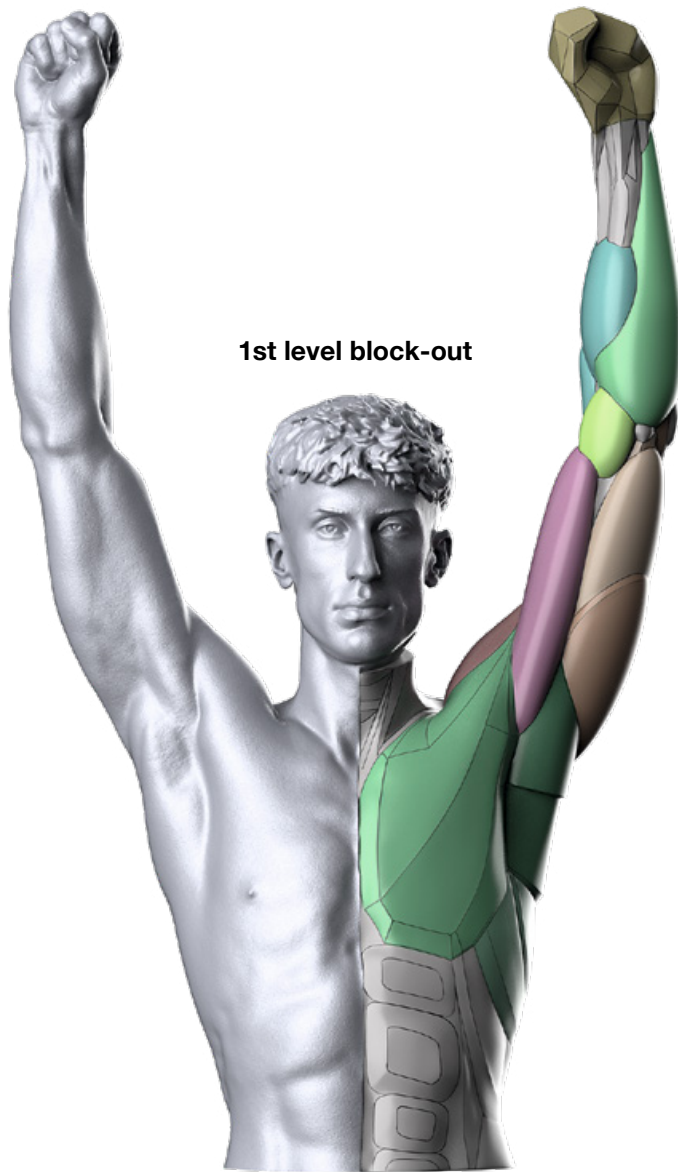
MV – V-pose

Front



MV – V-pose

Front



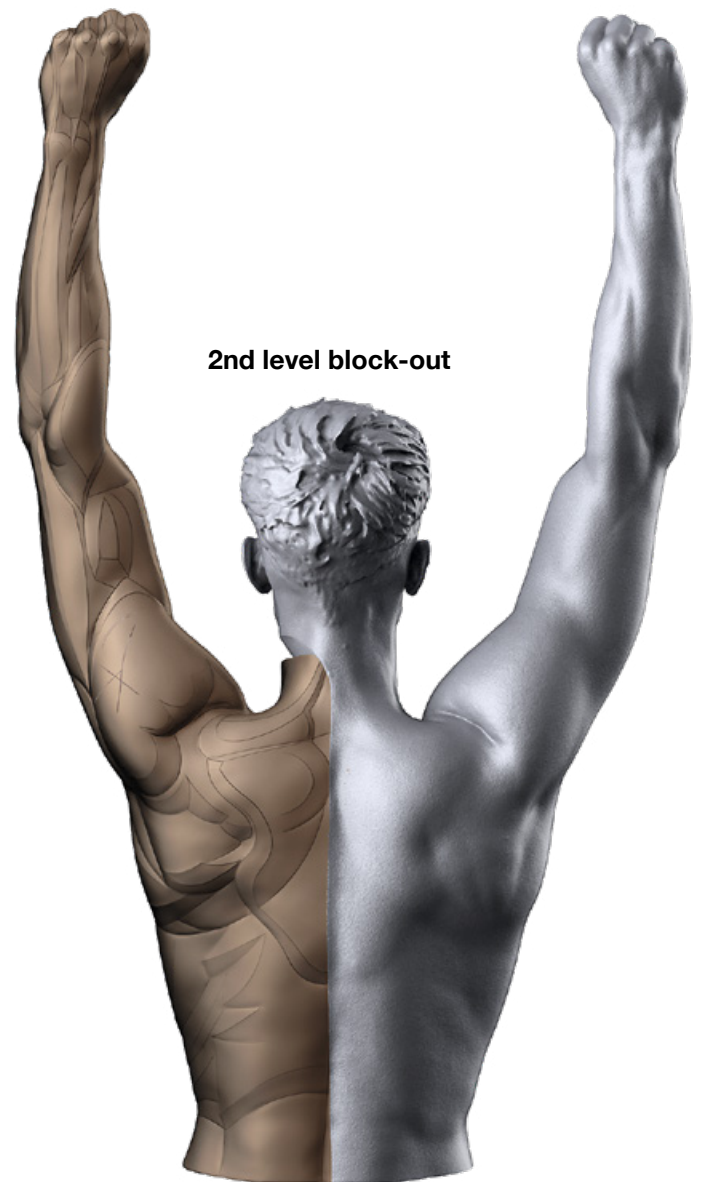
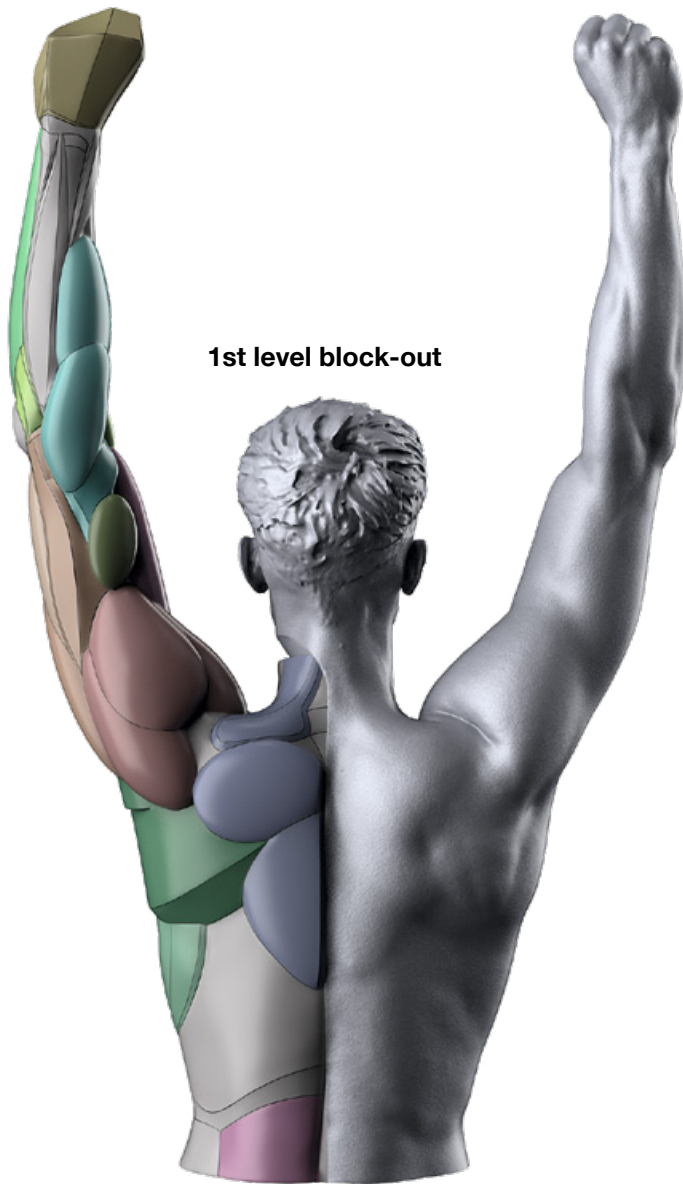
MV – V-pose

Back



MV – V-pose

Back



MV – V pose

Multi-angle

Skin**Muscles**

MV – V pose

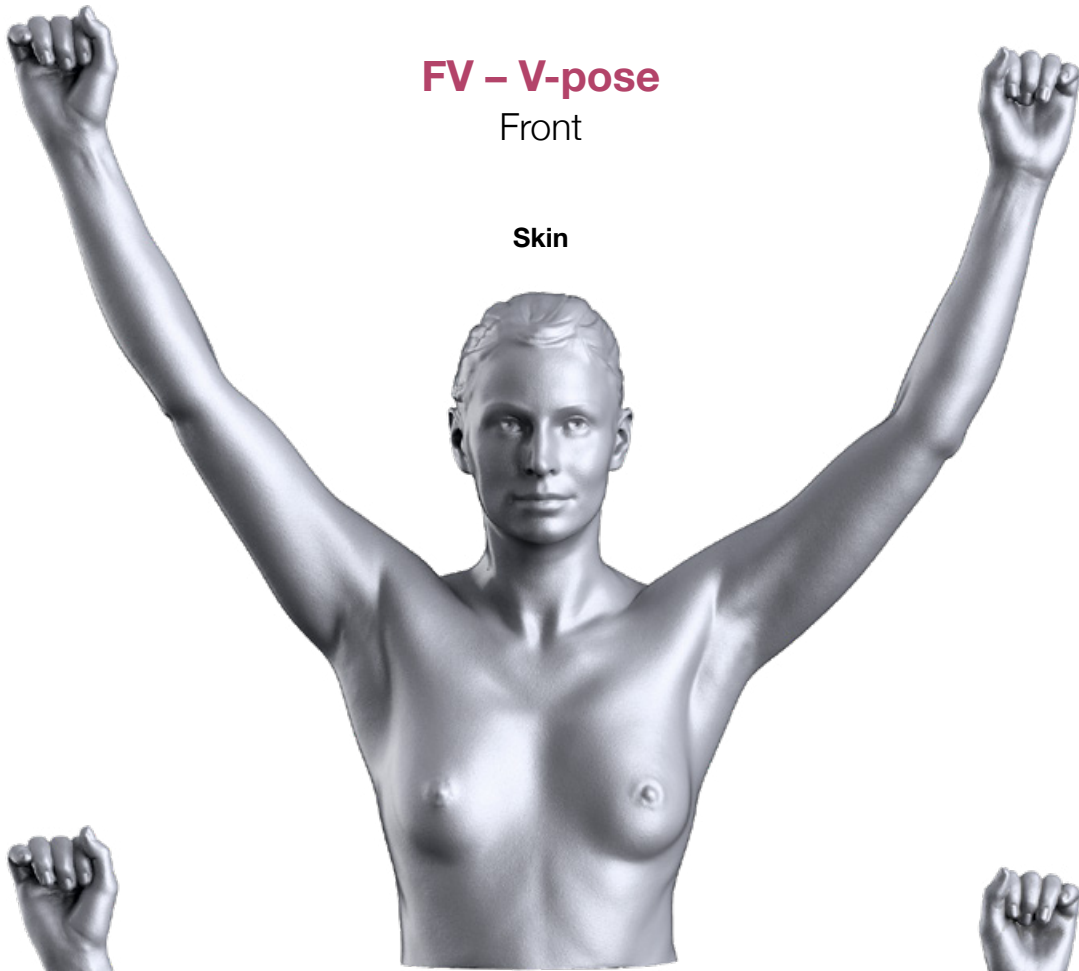
Multi-angle

1st level block-out**2nd level block-out**

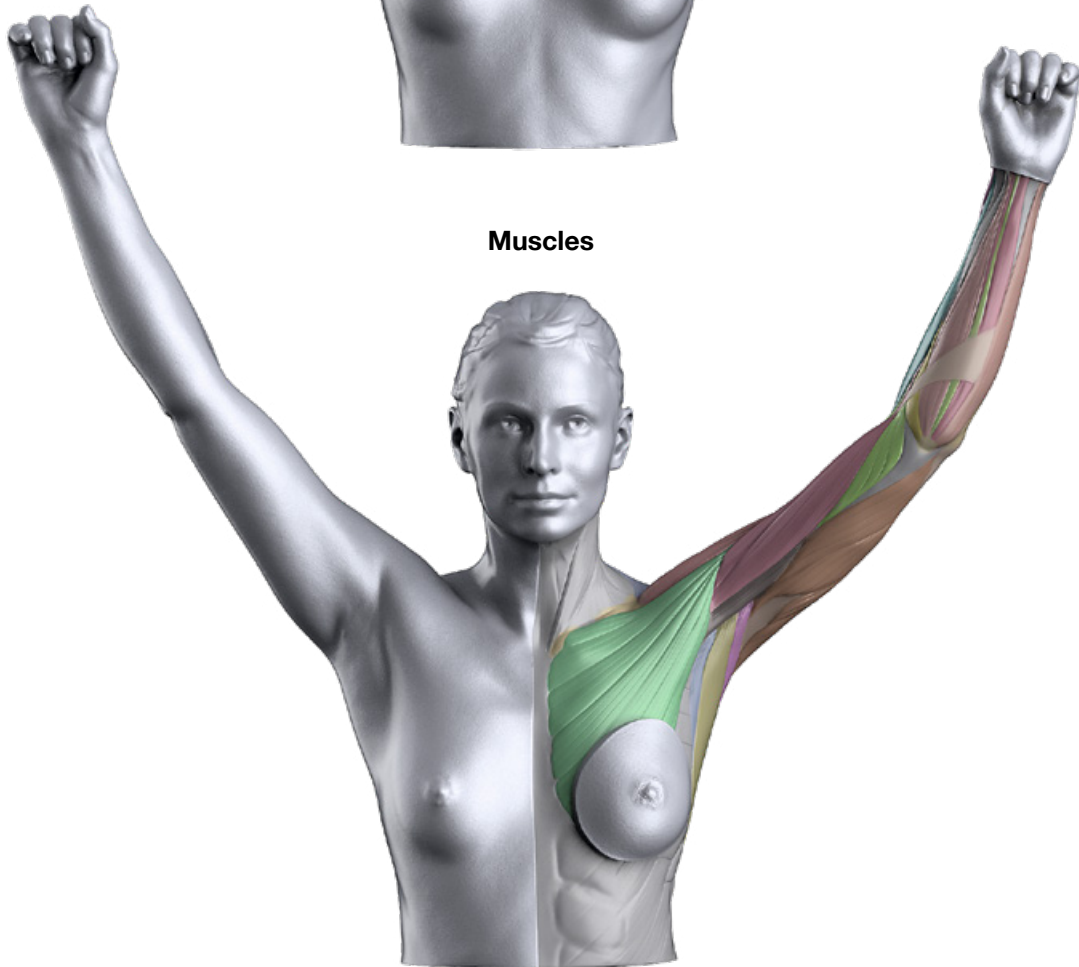
FV – V-pose

Front

Skin

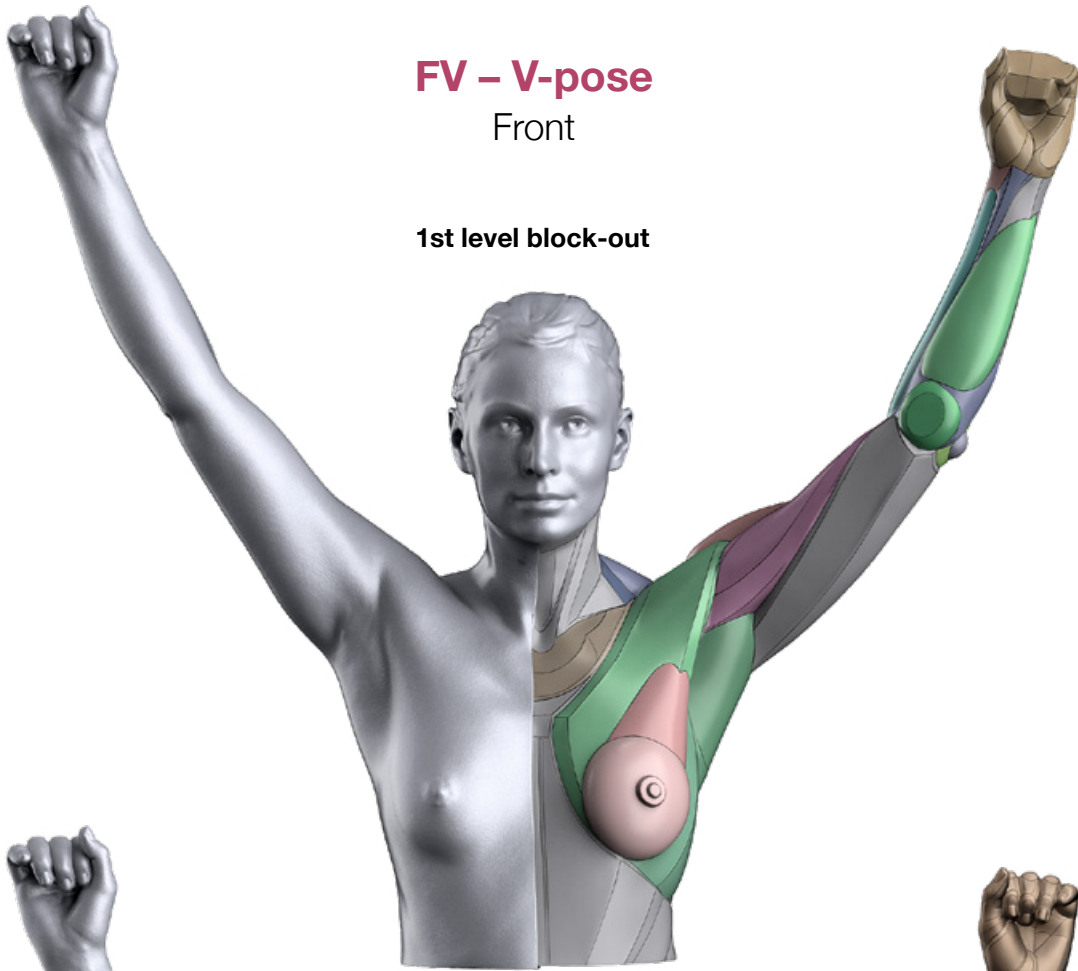
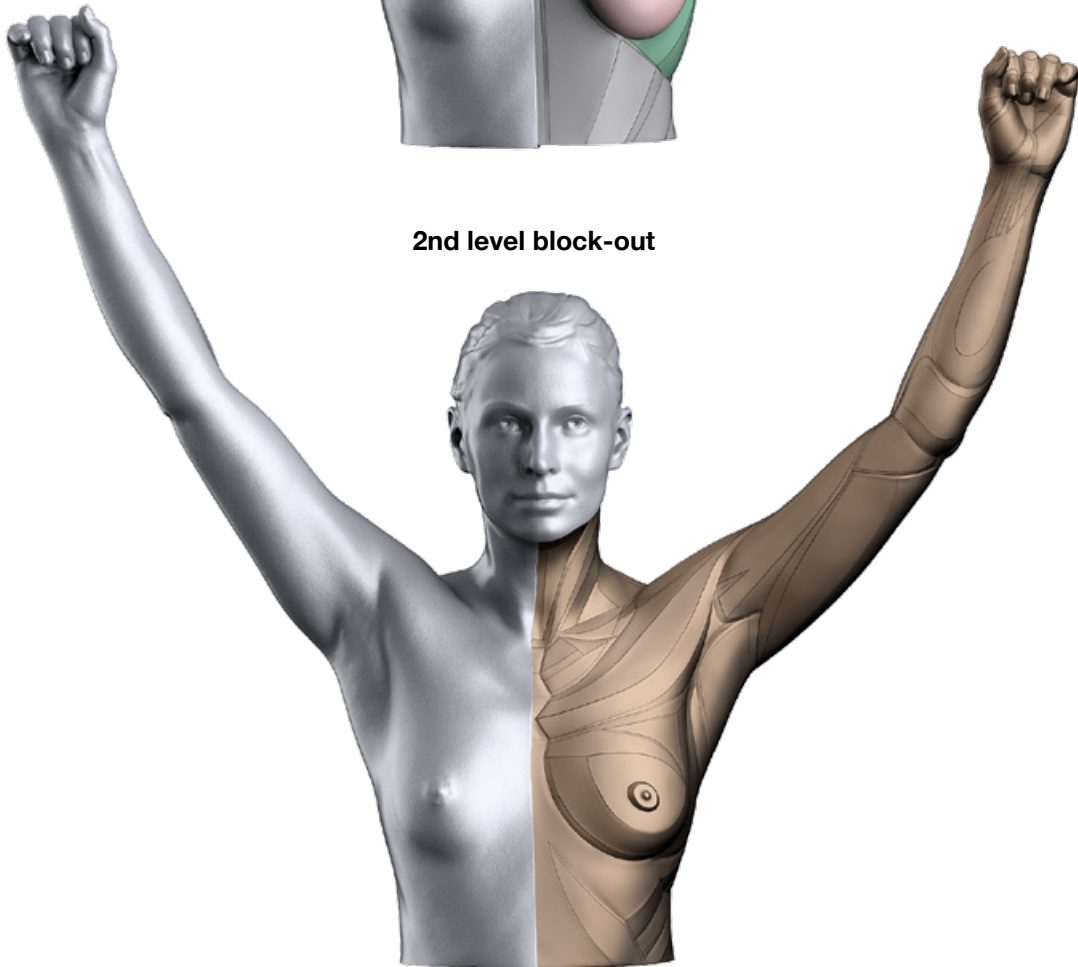


Muscles



FV – V-pose

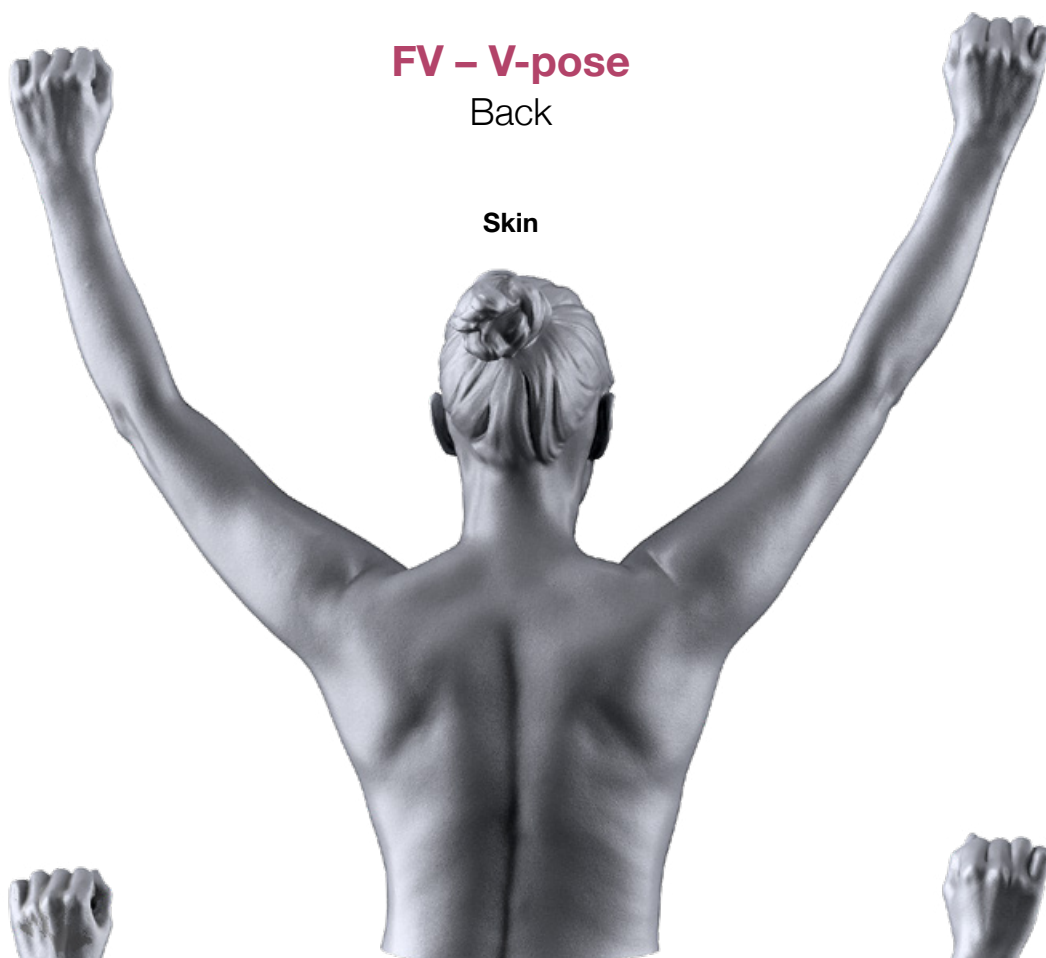
Front

1st level block-out**2nd level block-out**

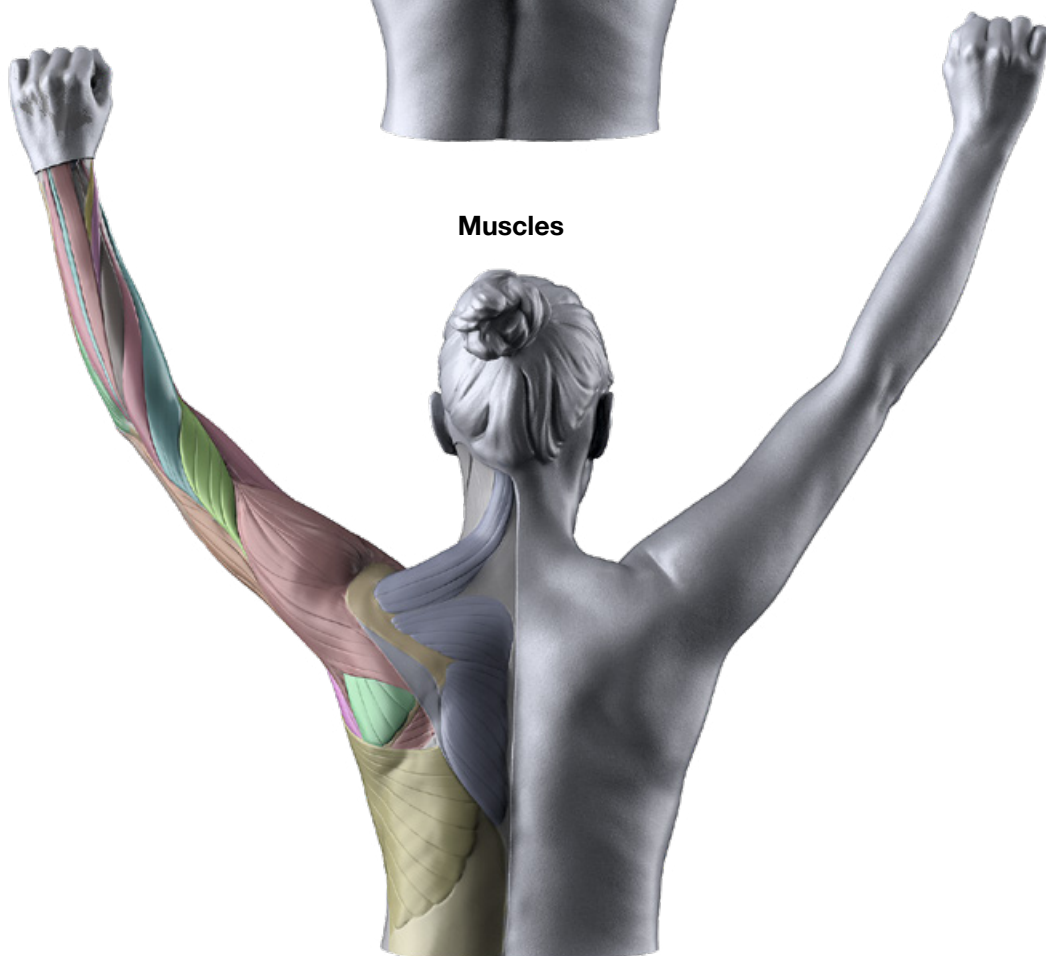
FV – V-pose

Back

Skin

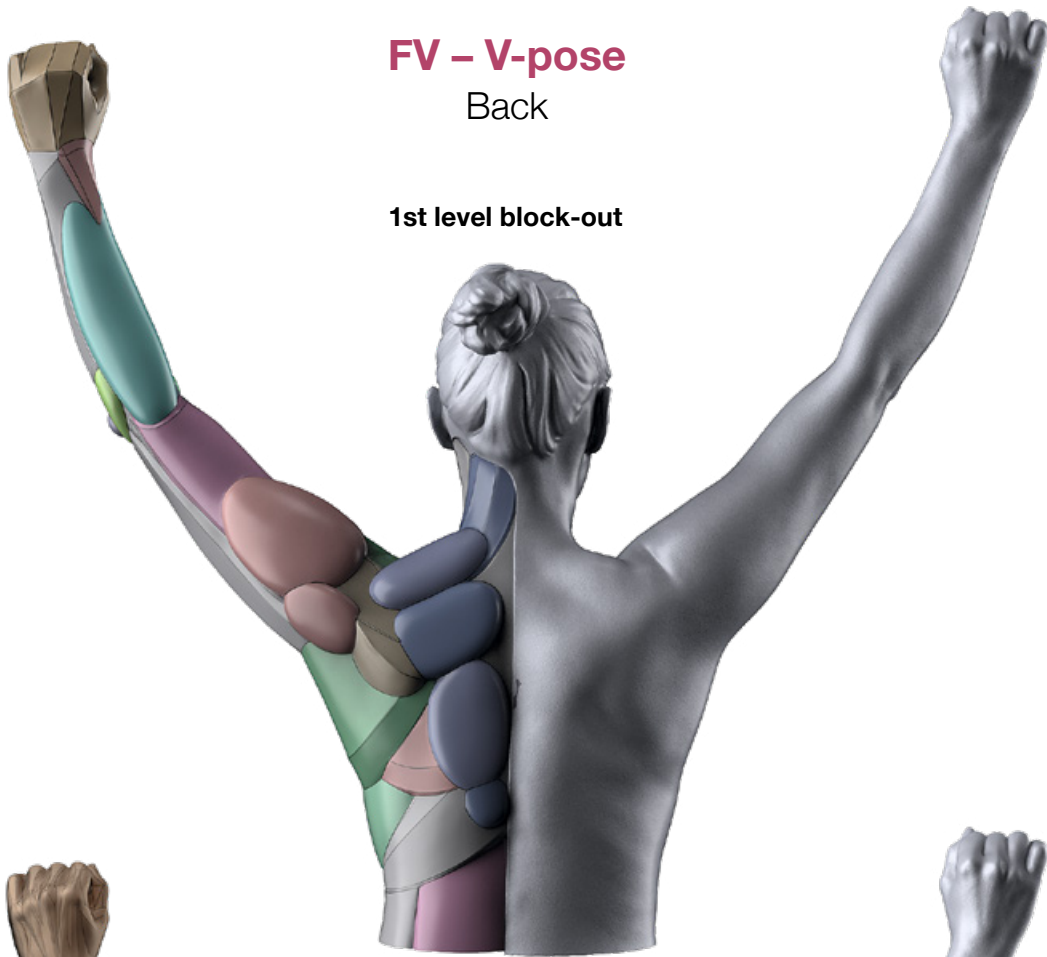
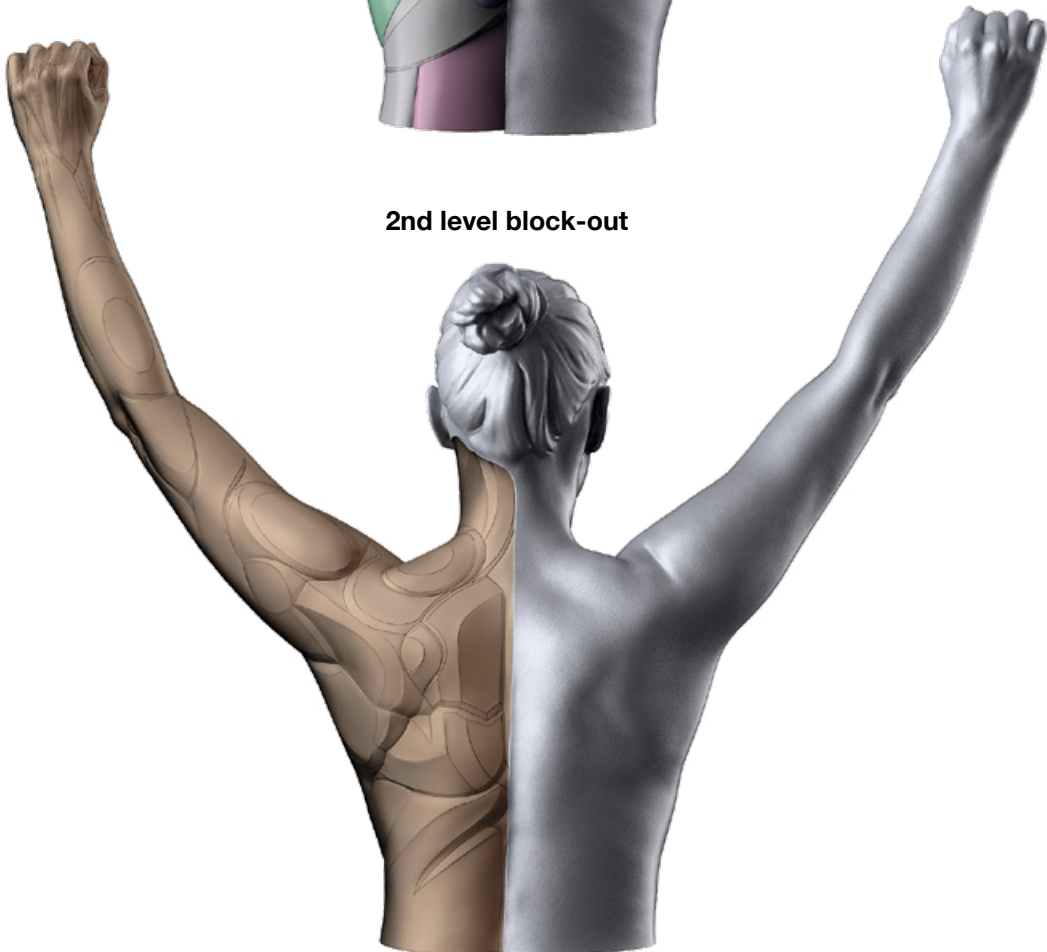


Muscles



FV – V-pose

Back

1st level block-out**2nd level block-out**

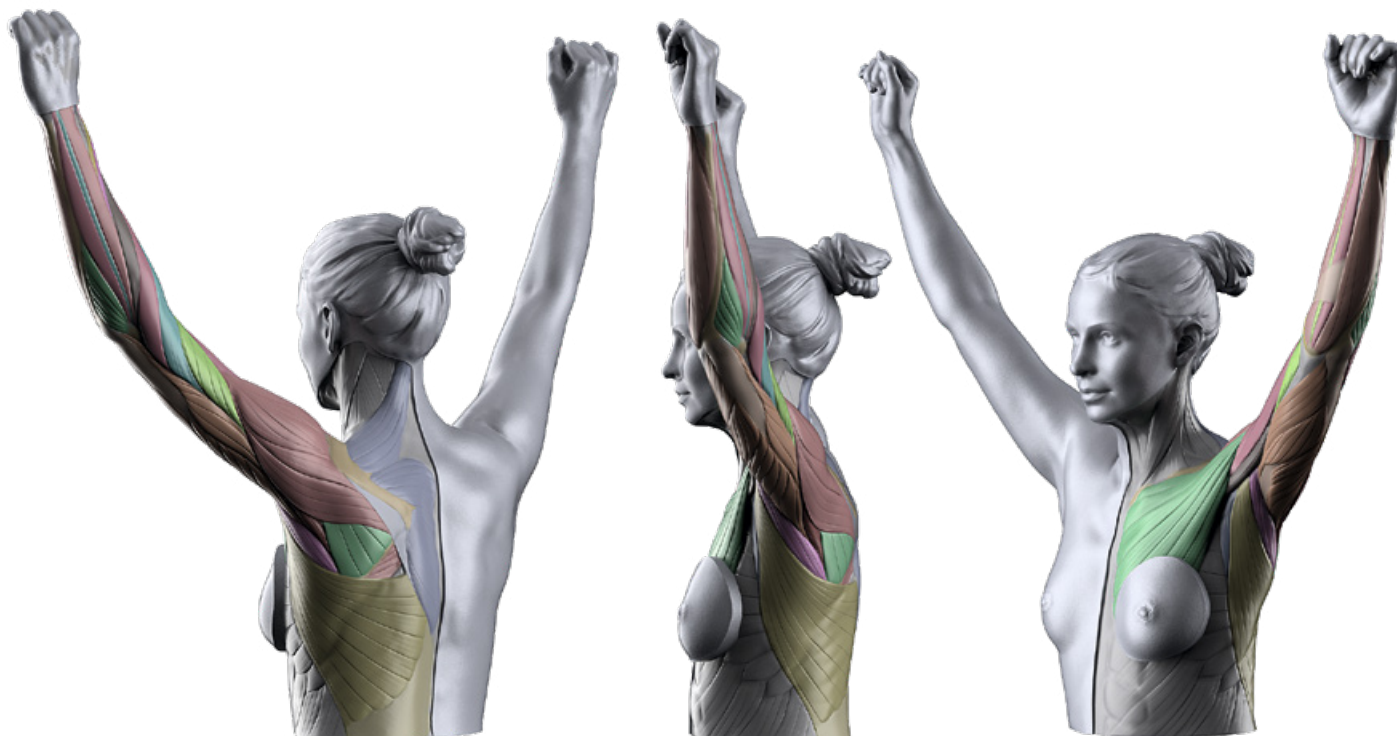
FV – V-pose

Multi-angle

Skin



Muscles



FV – V-pose

Multi-angle

1st level block-out**2nd level block-out**

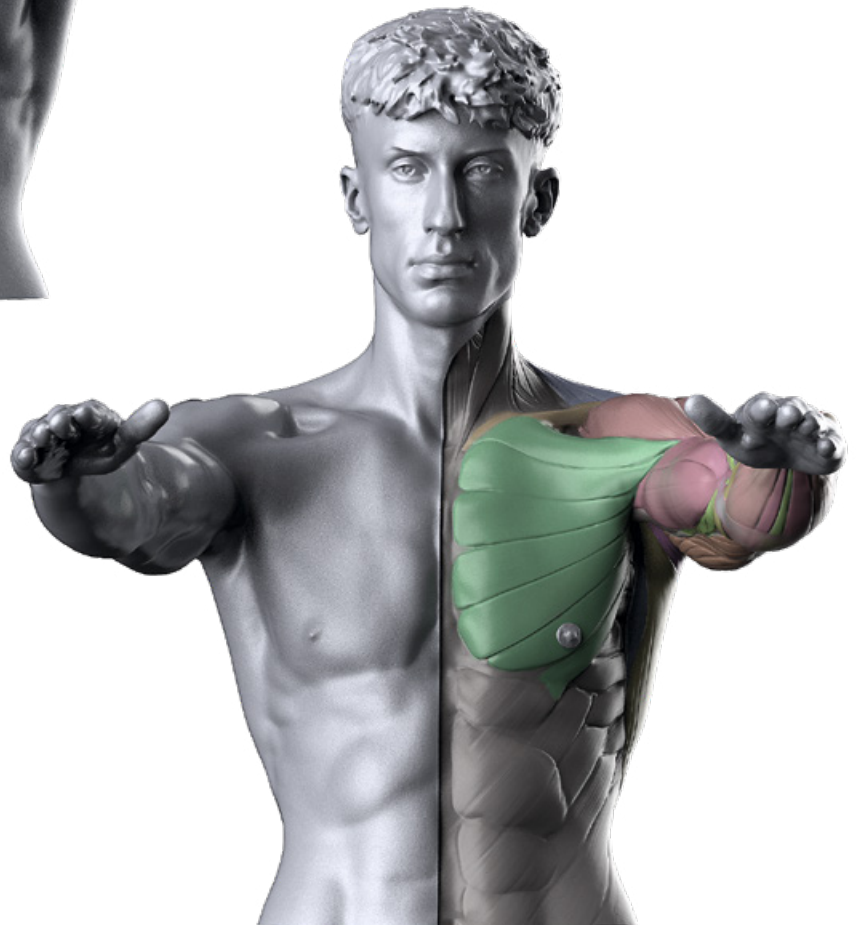
MF – Forward reach

Front

Skin



Muscles



MF – Forward reach

Front

1st level block-out



2nd level block-out



MF – Forward reach

Back

Skin



Muscles



MF – Forward reach

Back

1st level block-out

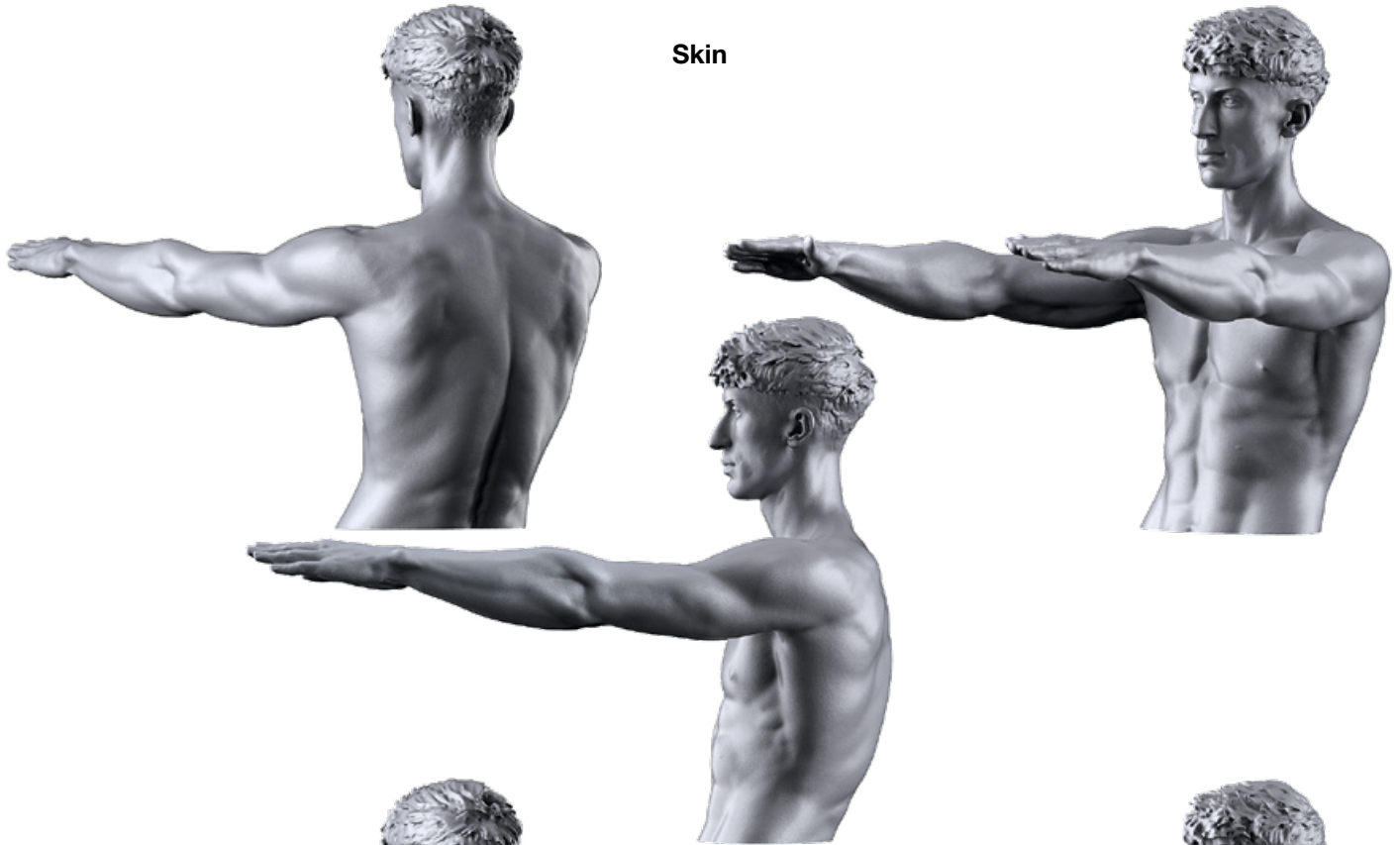
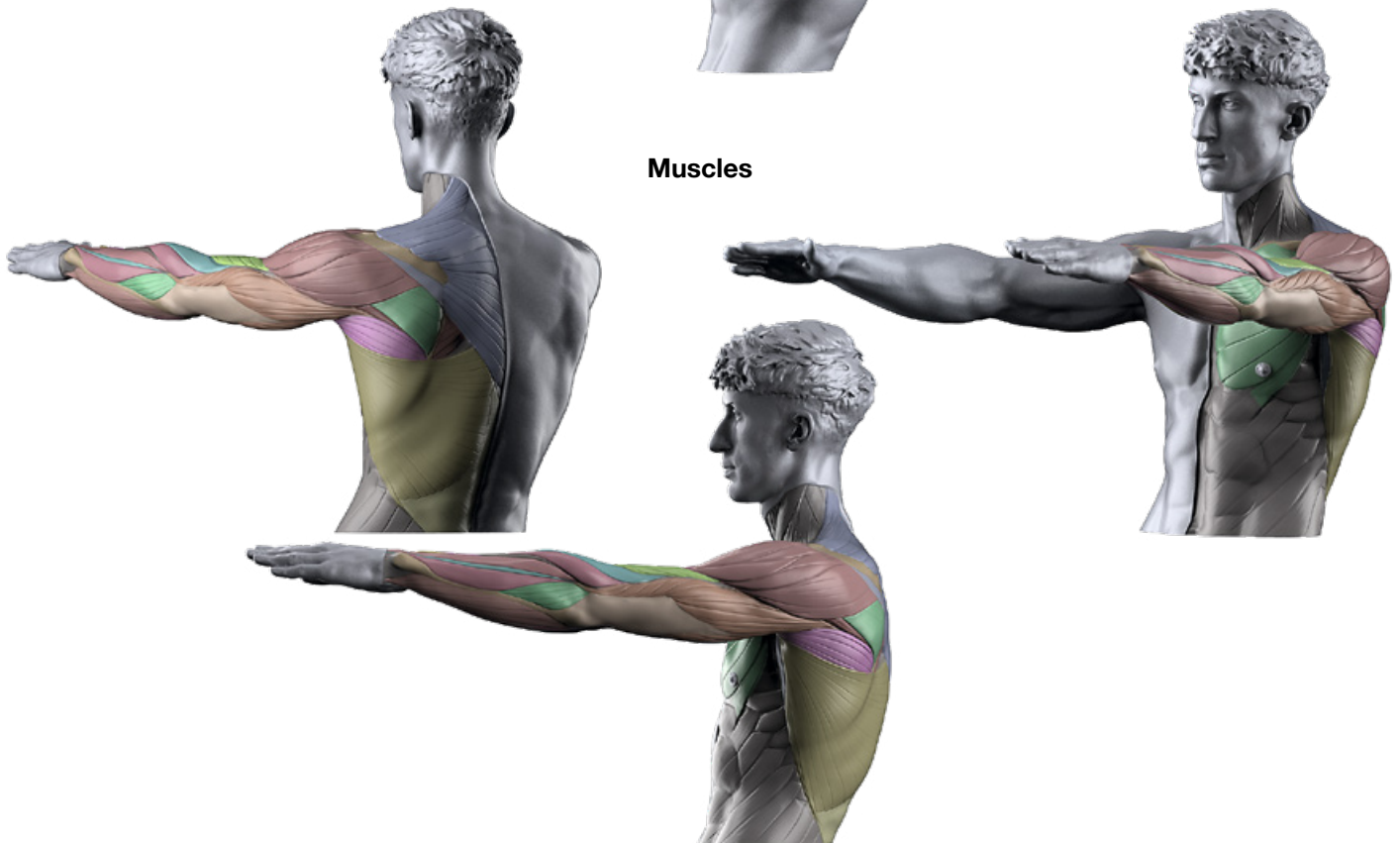


2nd level block-out



MF – Forward reach

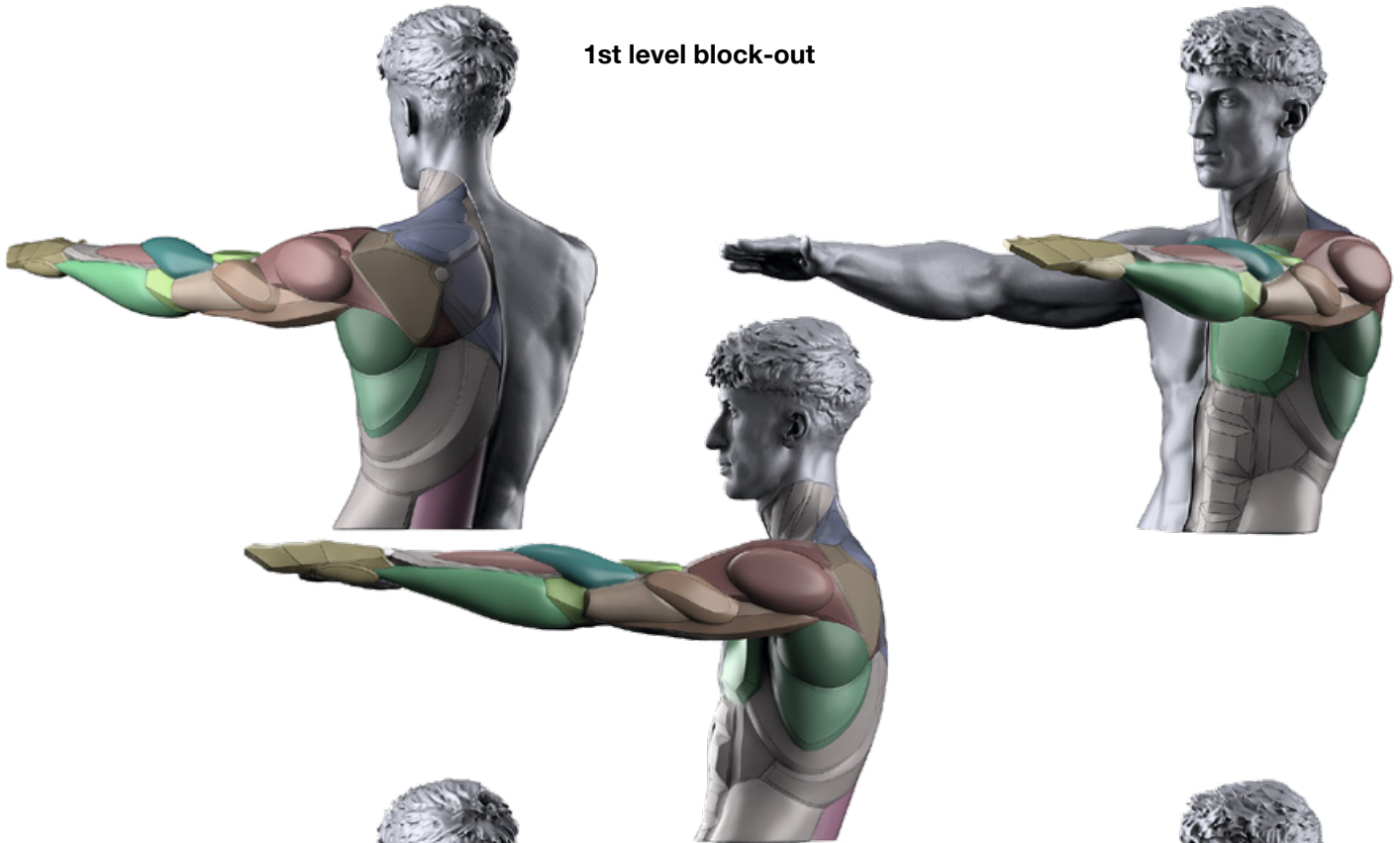
Multi-angle

Skin**Muscles**

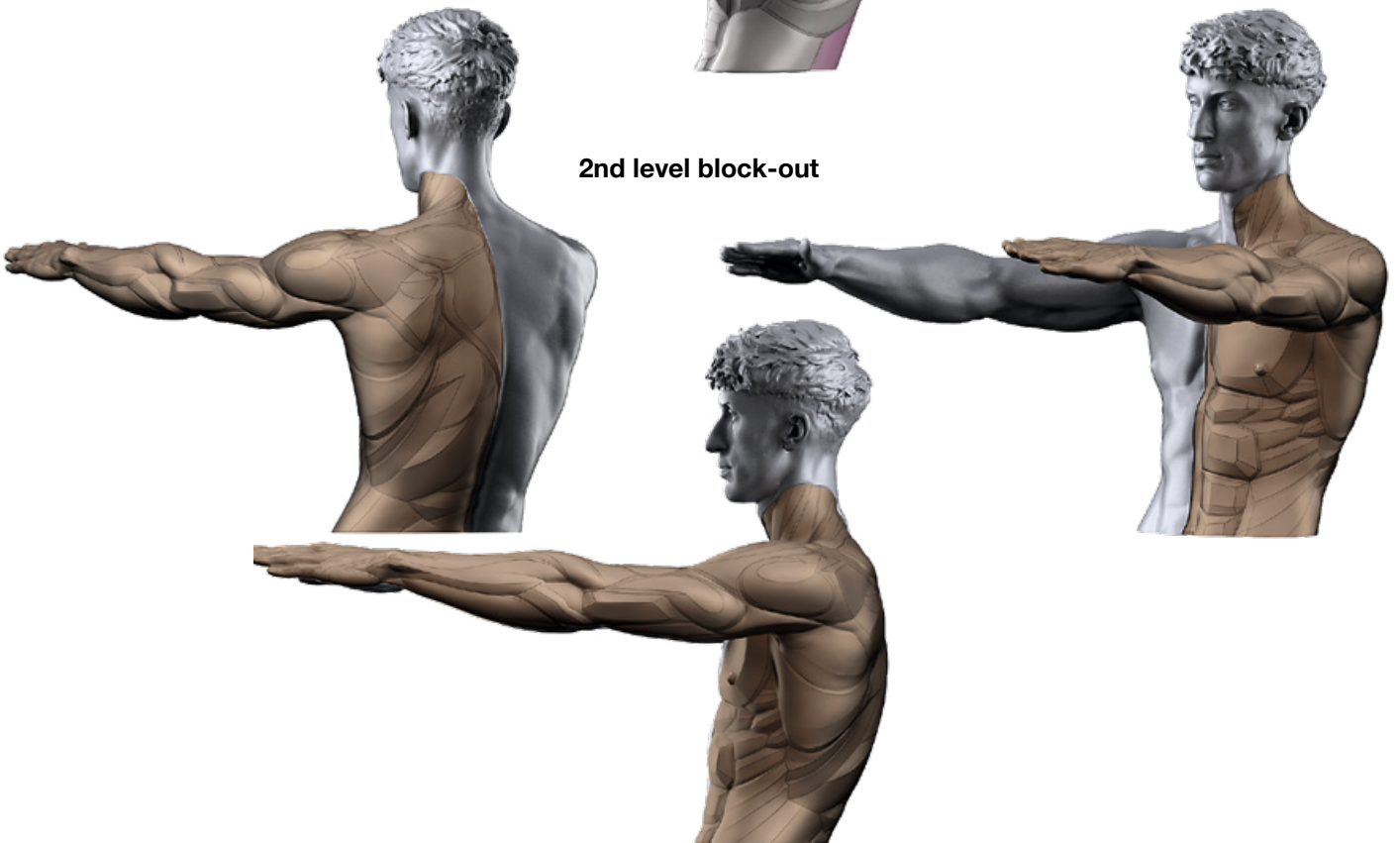
MF – Forward reach

Multi-angle

1st level block-out



2nd level block-out



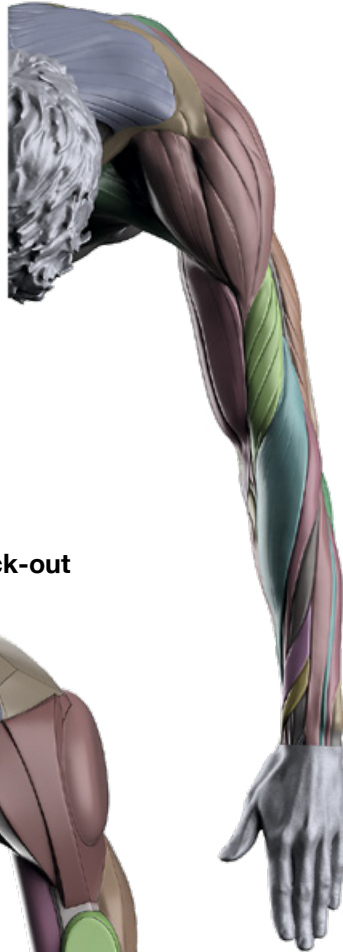
MF – Forward reach

Top view

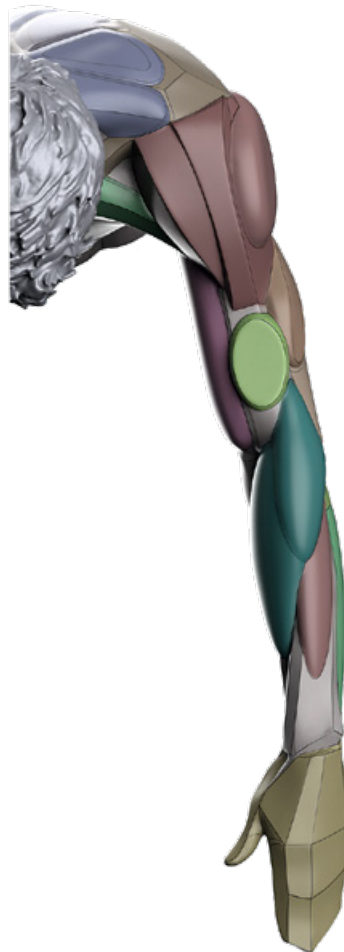
Skin



Muscles



1st level block-out

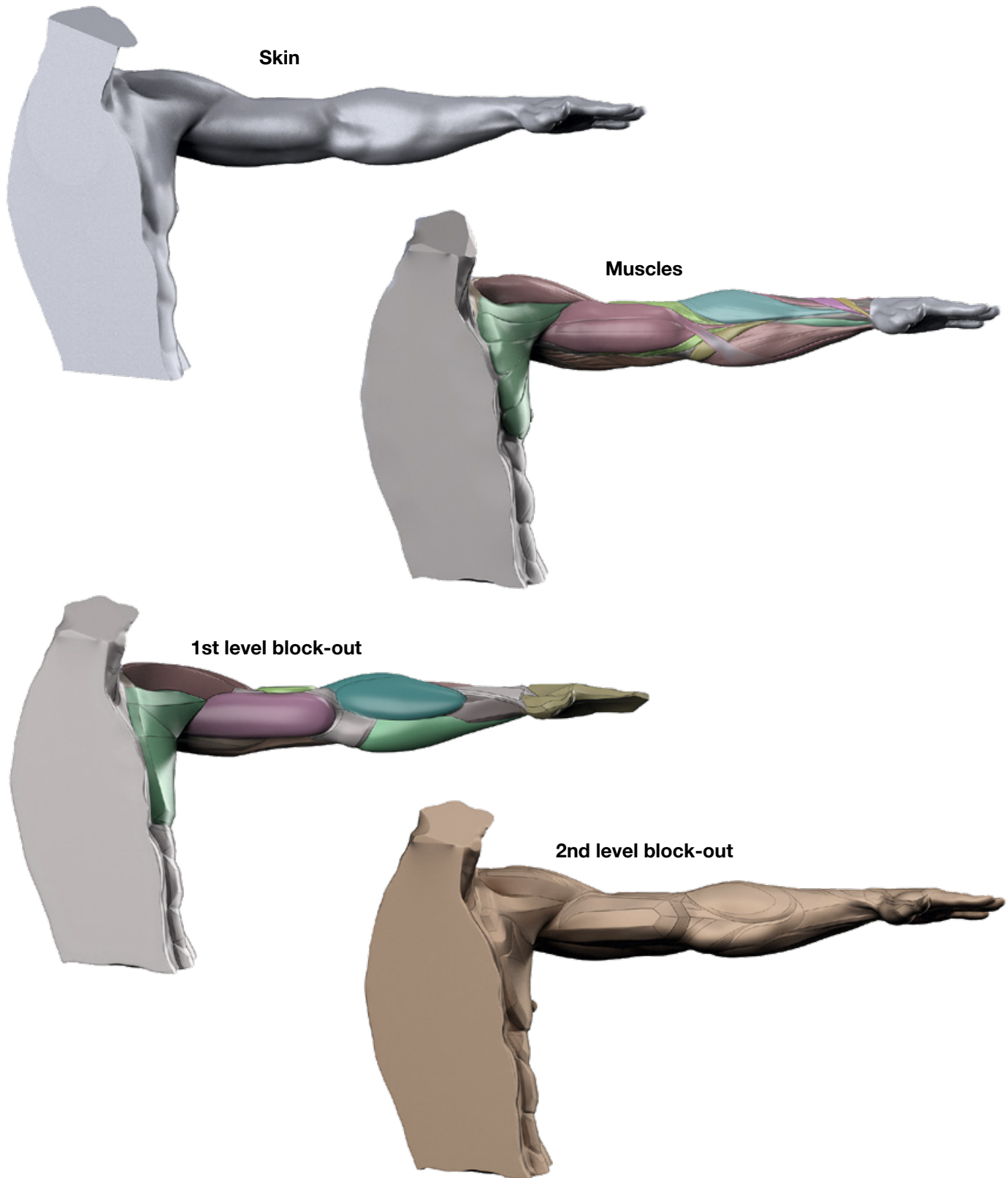


2nd level block-out



MF – Forward reach

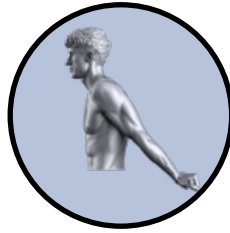
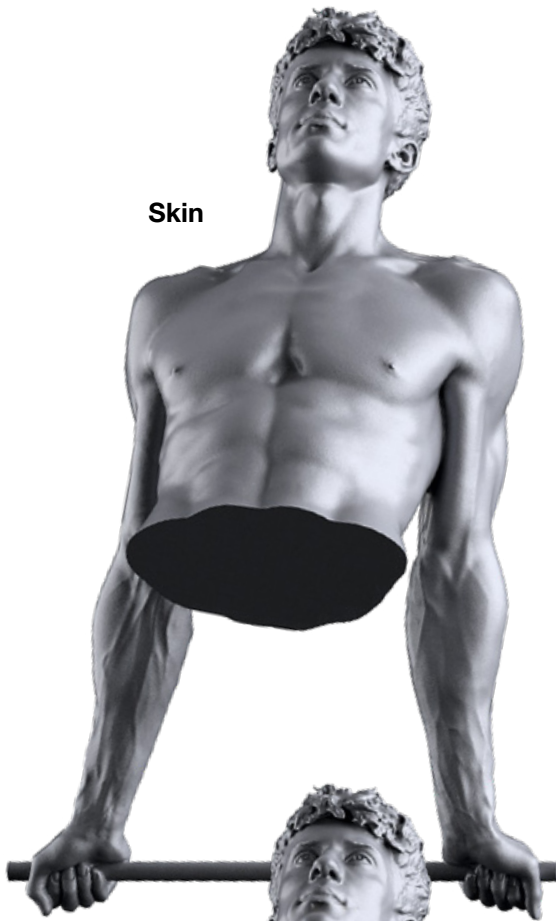
Medial view



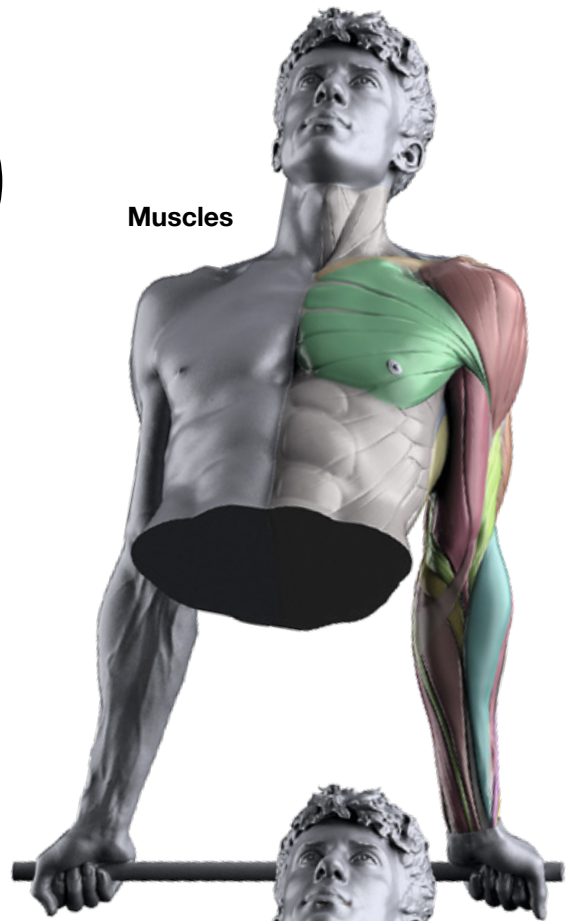
MB – Arms back

Front

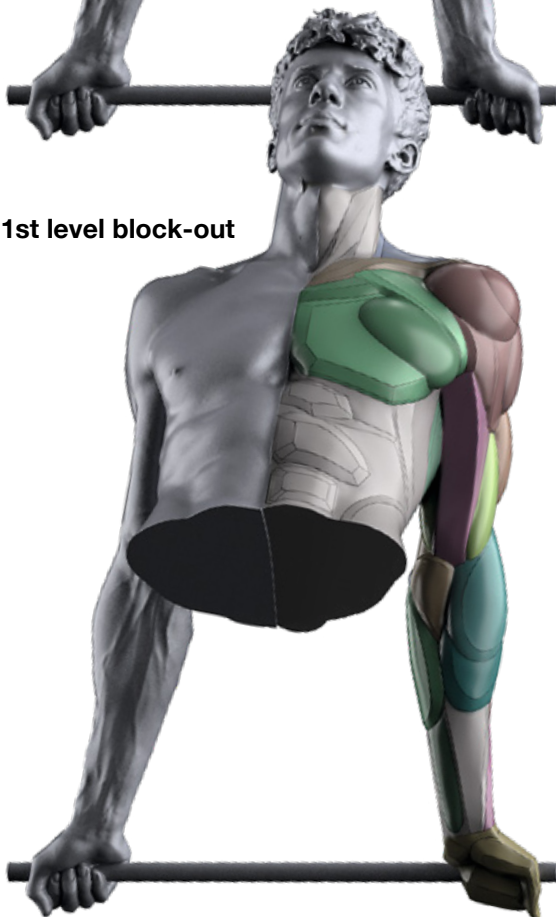
Skin



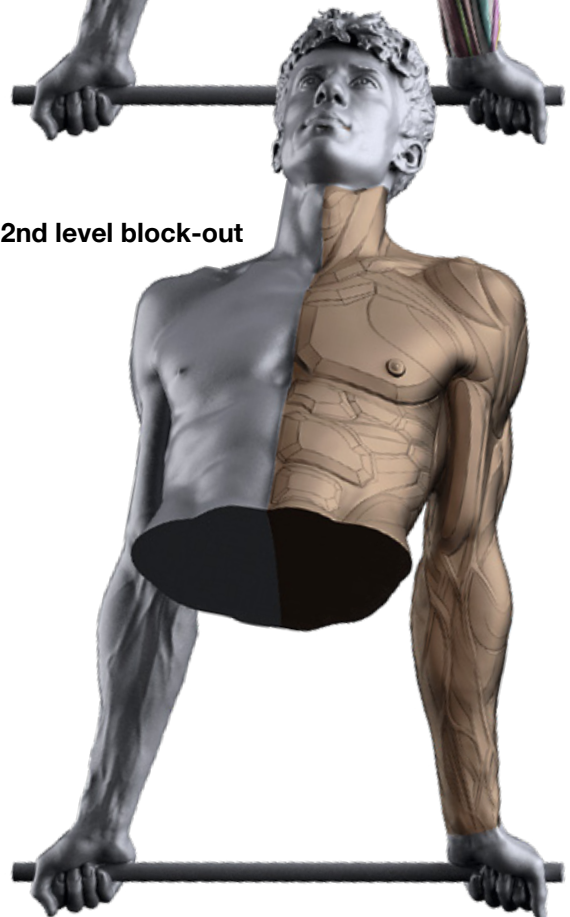
Muscles



1st level block-out

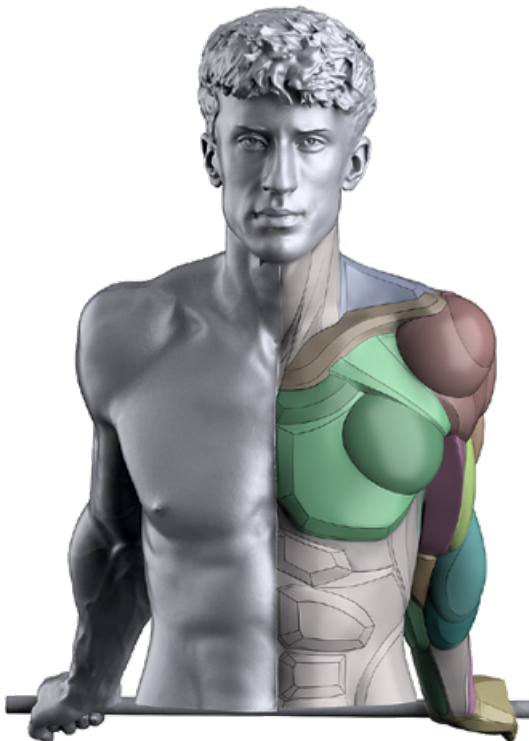
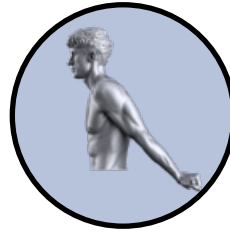
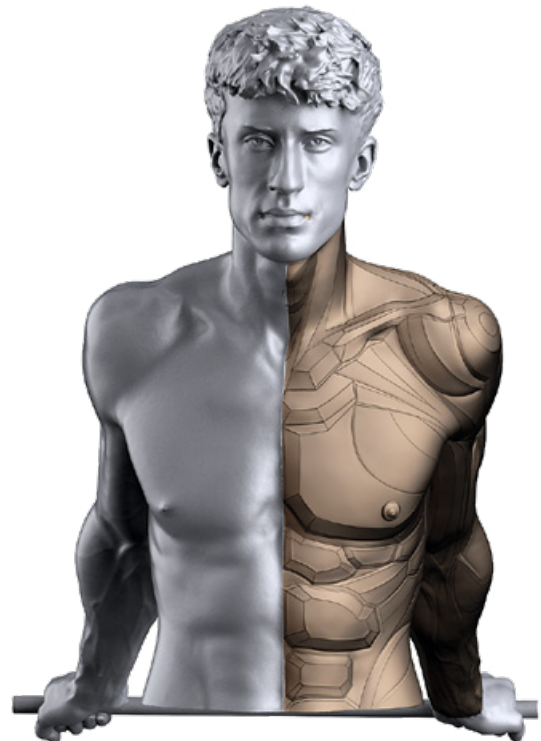


2nd level block-out



MB – Arms back

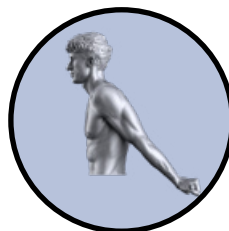
Front

Skin**1st level block-out****Muscles****2nd level block-out**

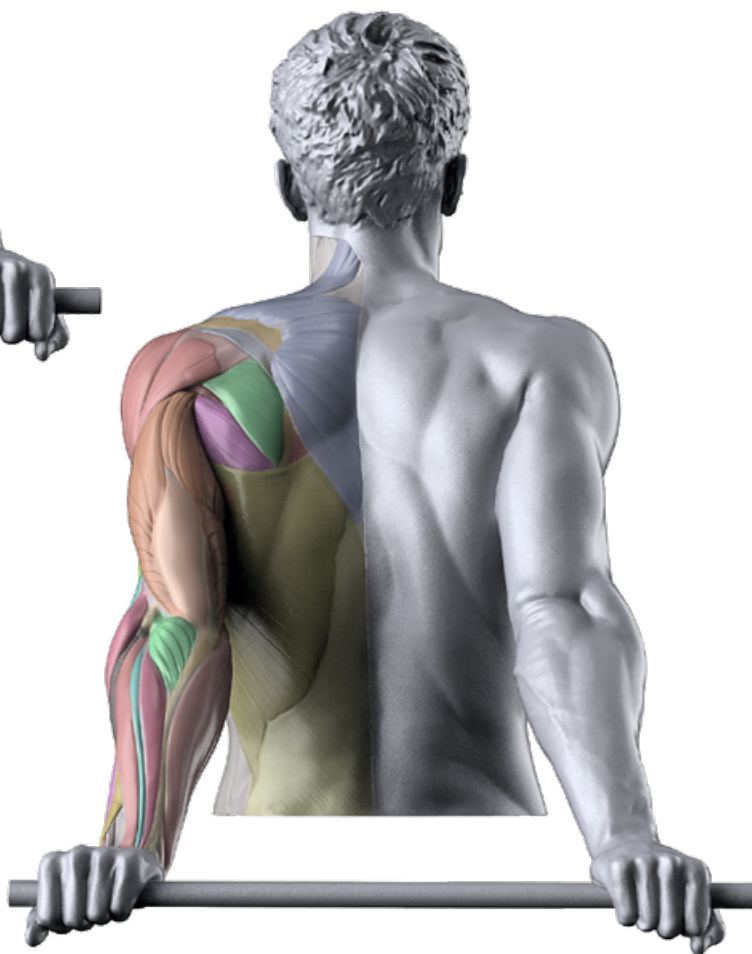
MB – Arms back

Back

Skin



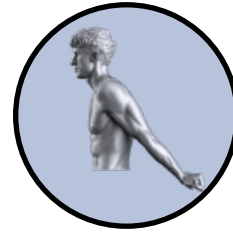
Muscles



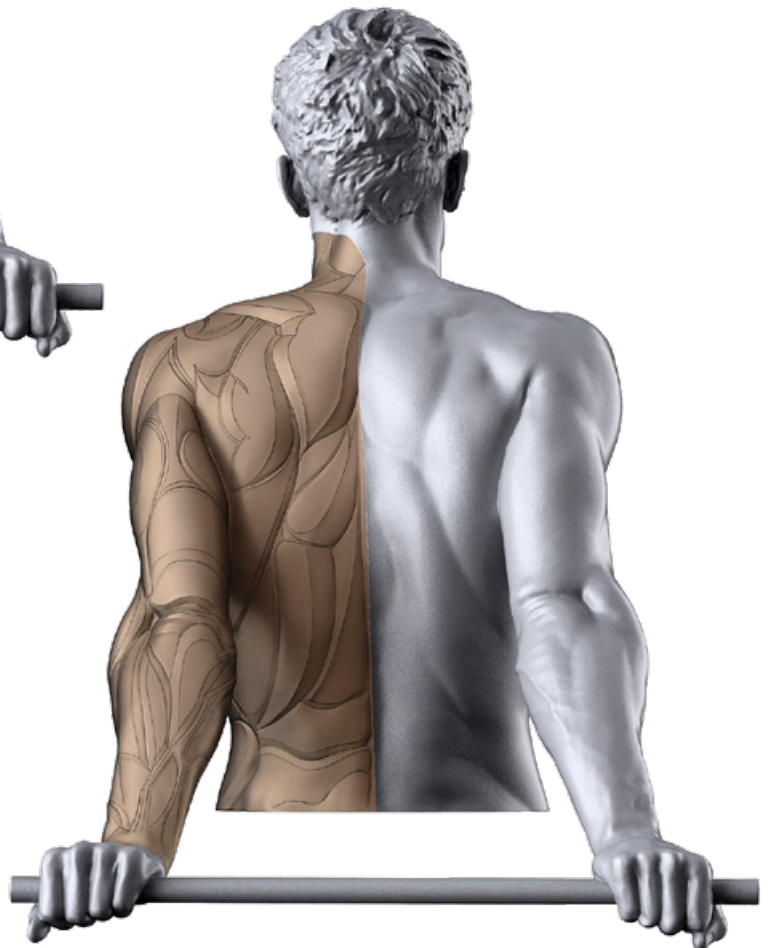
MB – Arms back

Back

1st level block-out



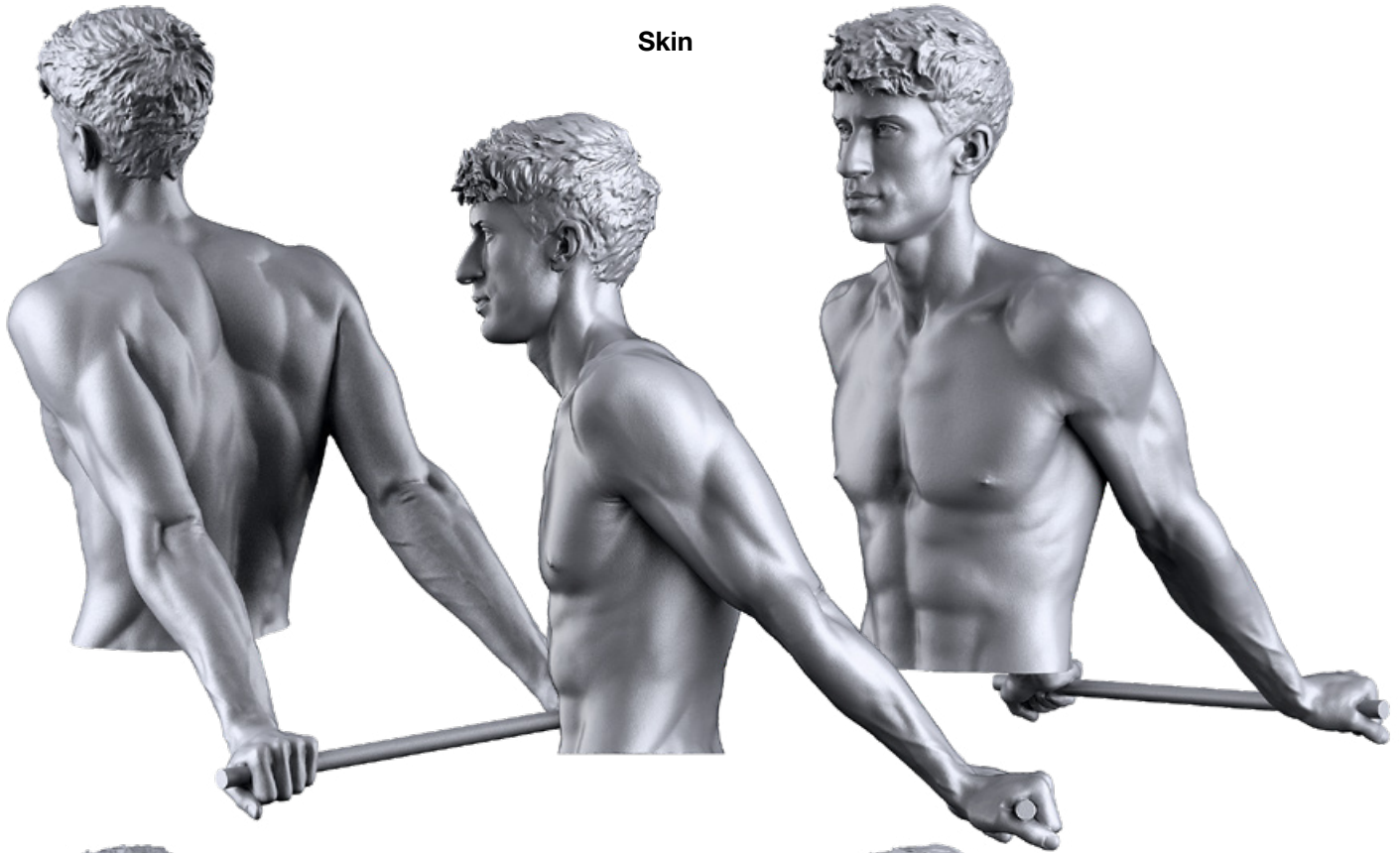
2nd level block-out



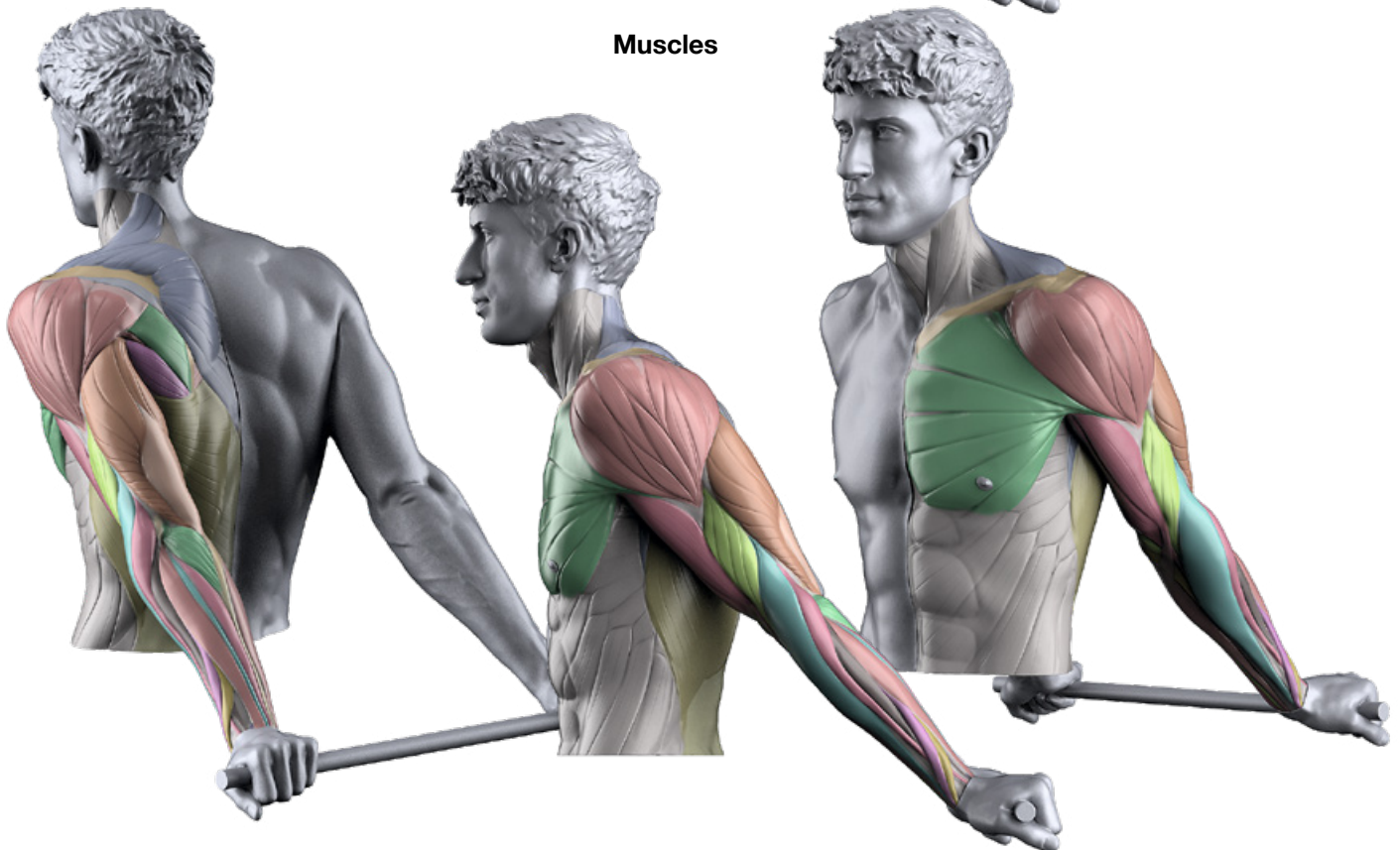
MB – Arms back

Multi-angle

Skin



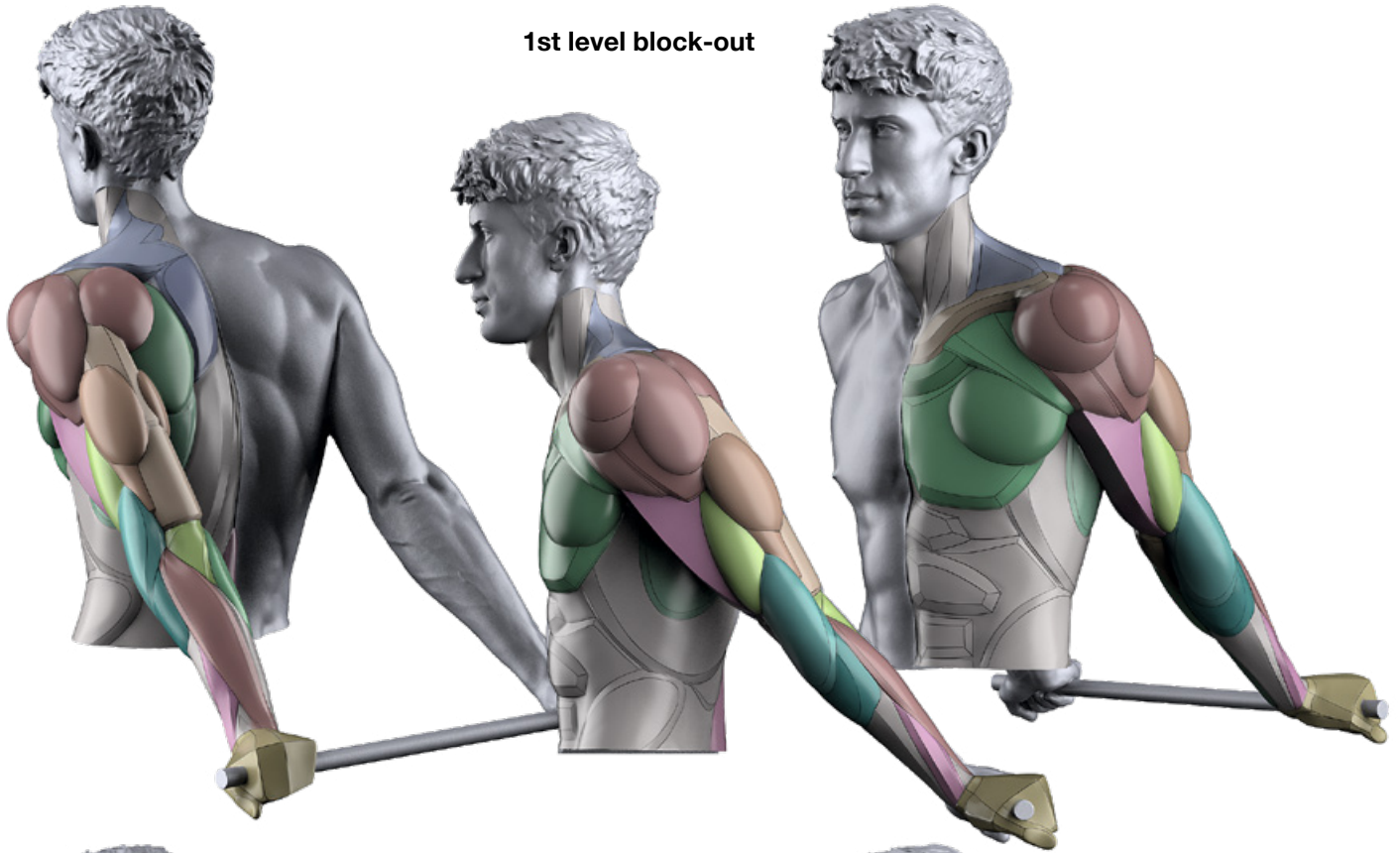
Muscles



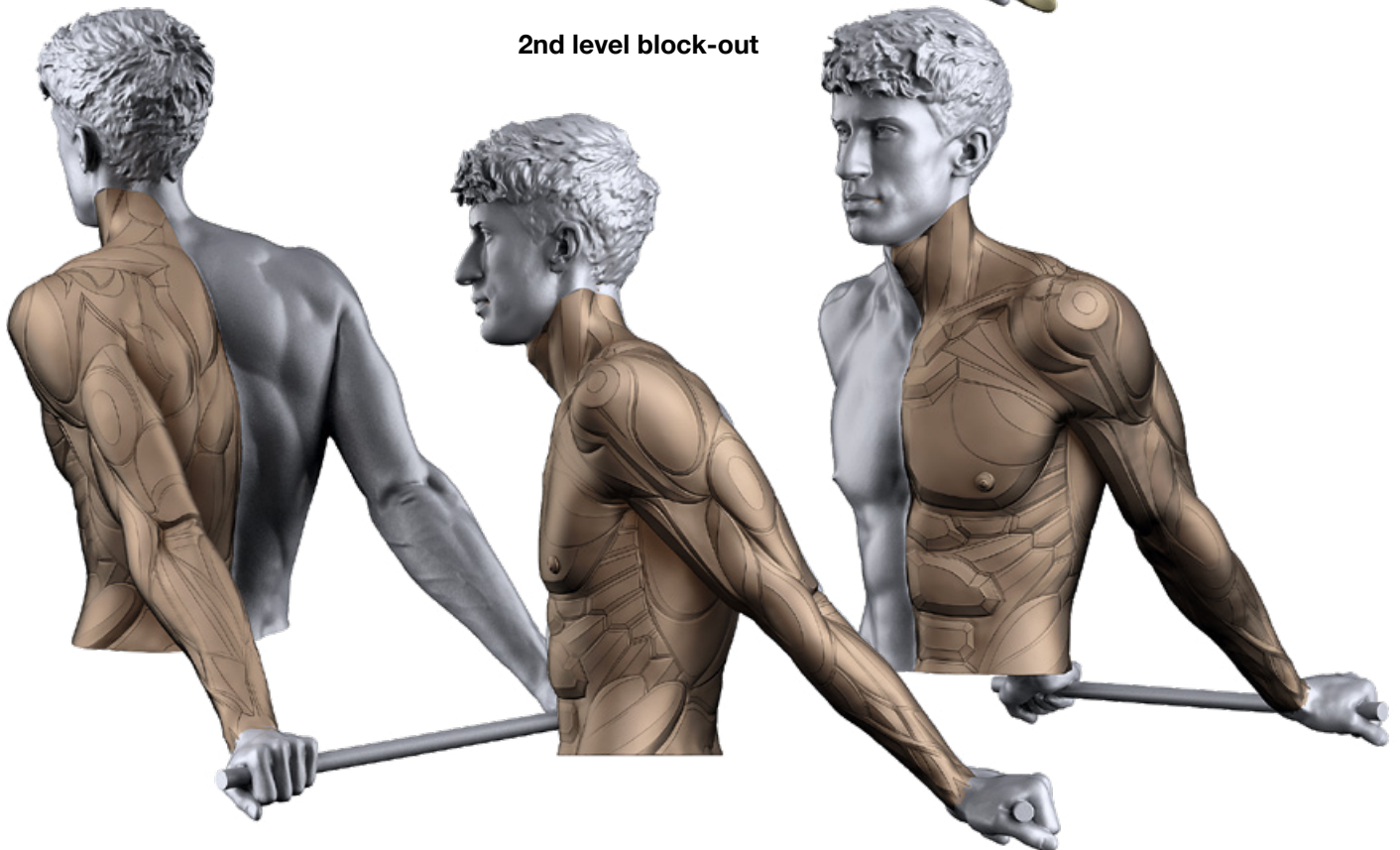
MB – Arms back

Multi-angle

1st level block-out



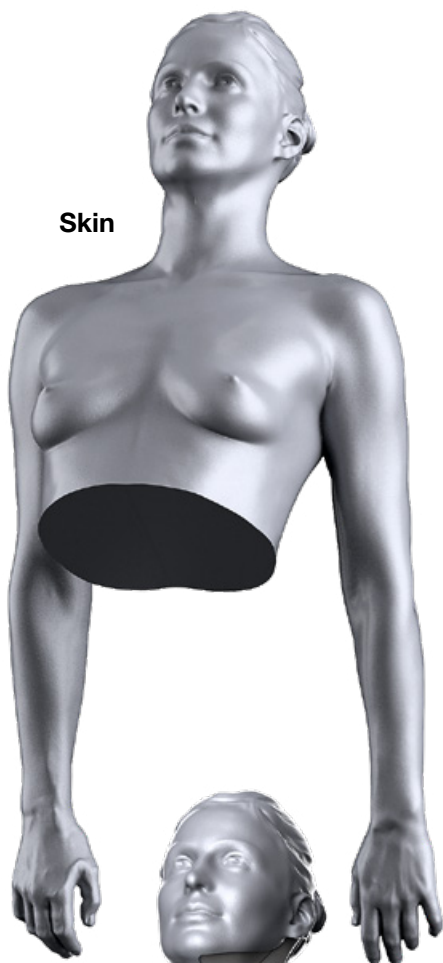
2nd level block-out



FB – Arms back

Front

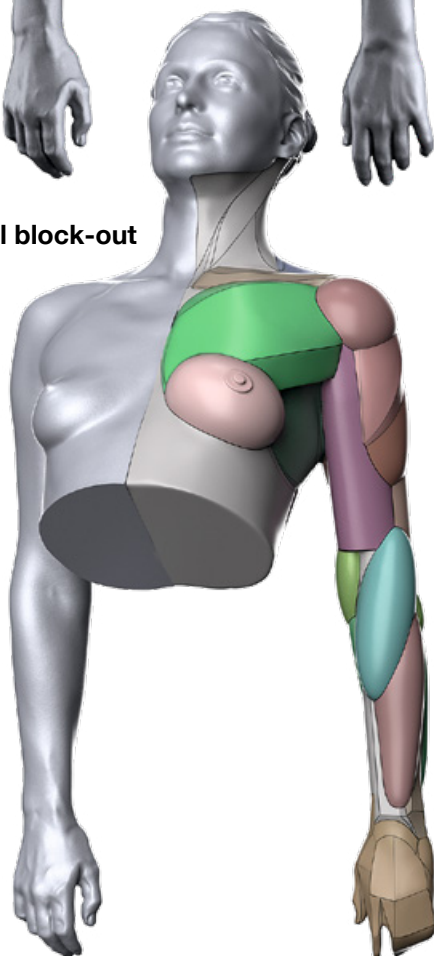
Skin



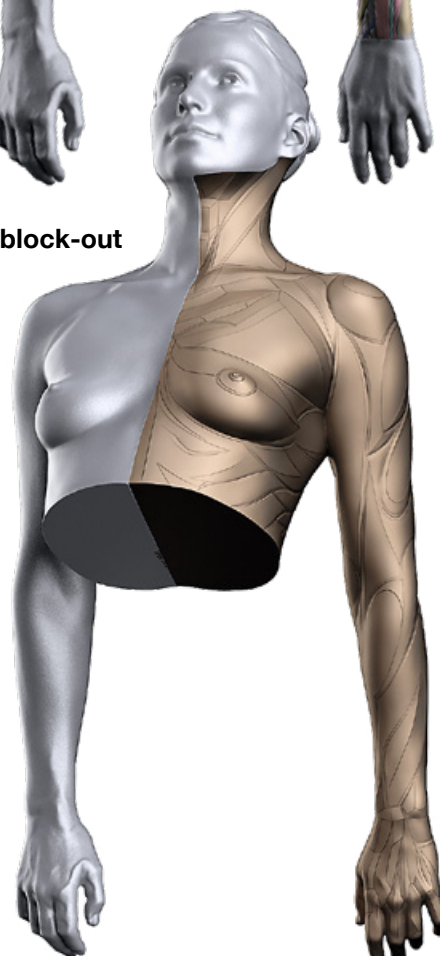
Muscles



1st level block-out

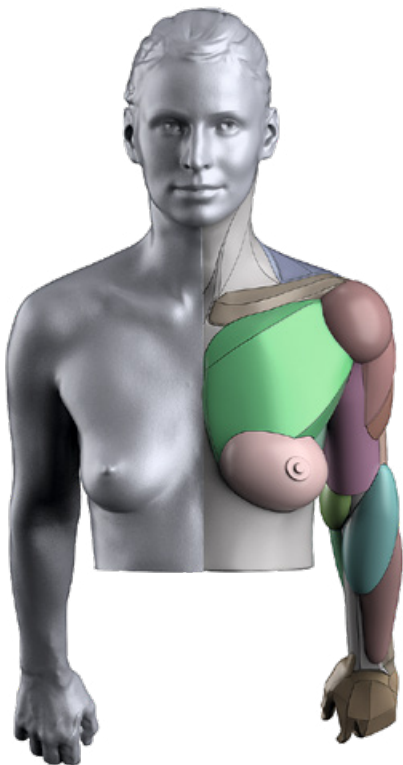
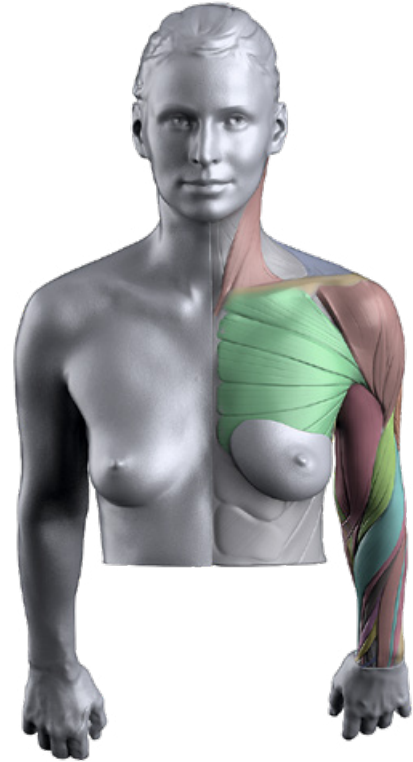
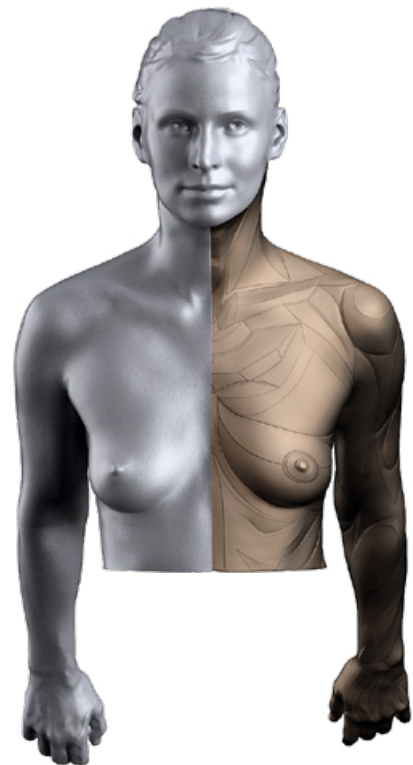


2nd level block-out



FB – Arms back

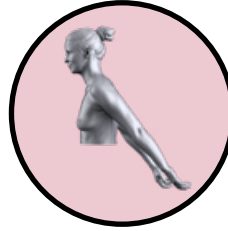
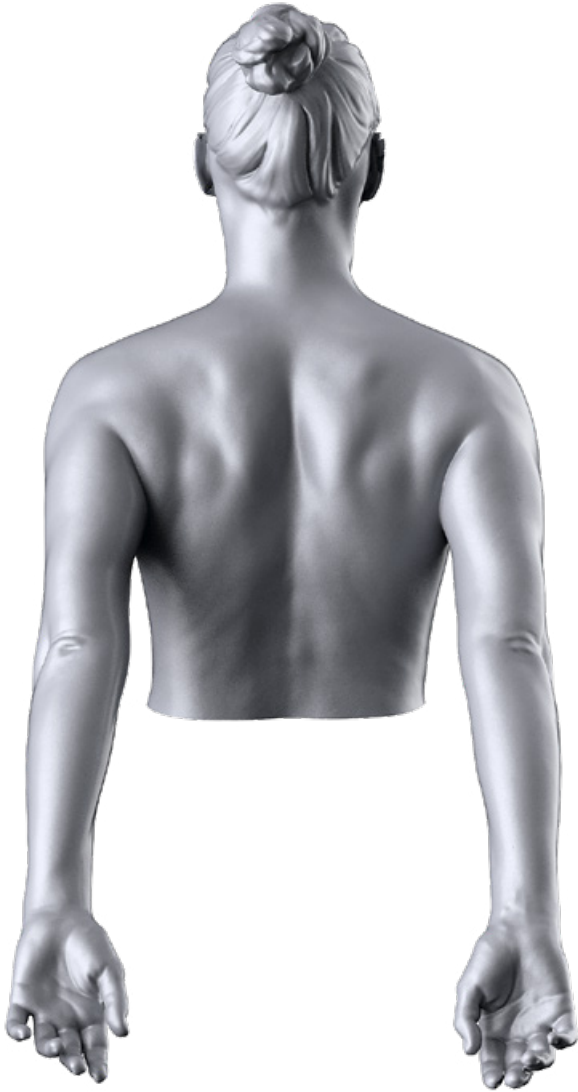
Front

Skin**1st level block-out****Muscles****2nd level block-out**

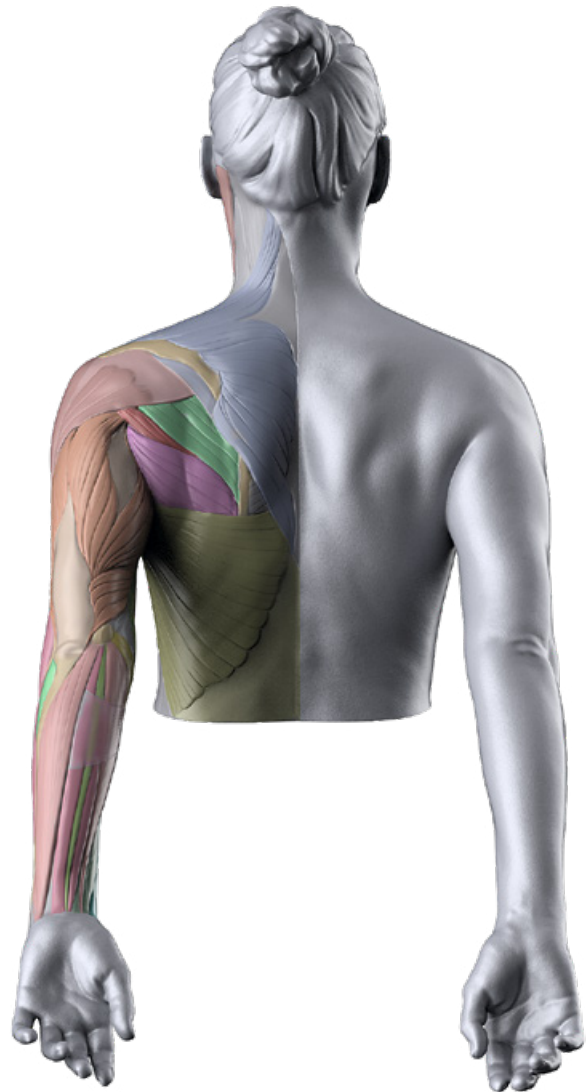
FB – Arms back

Back

Skin

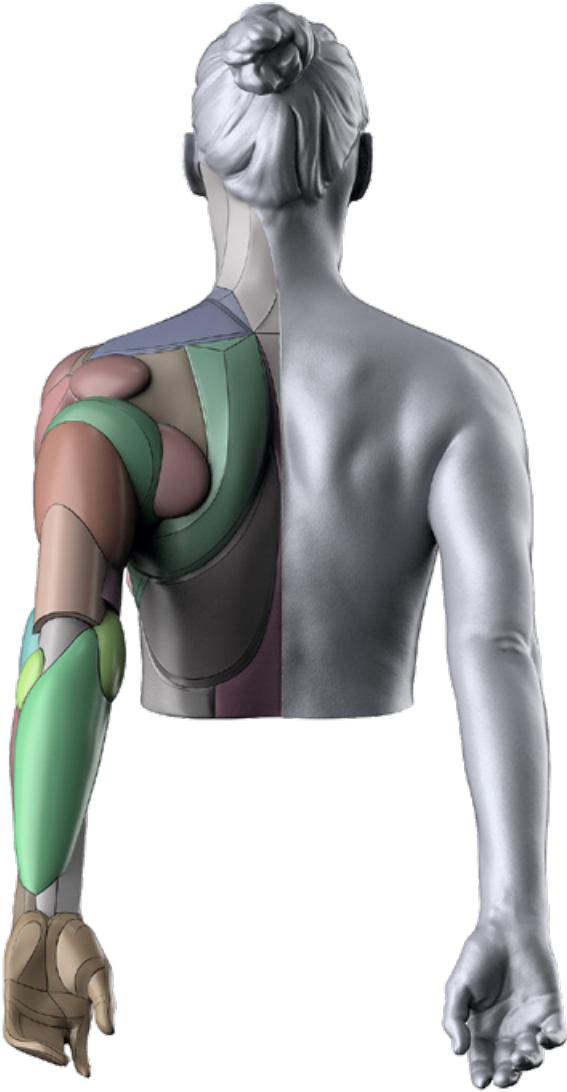
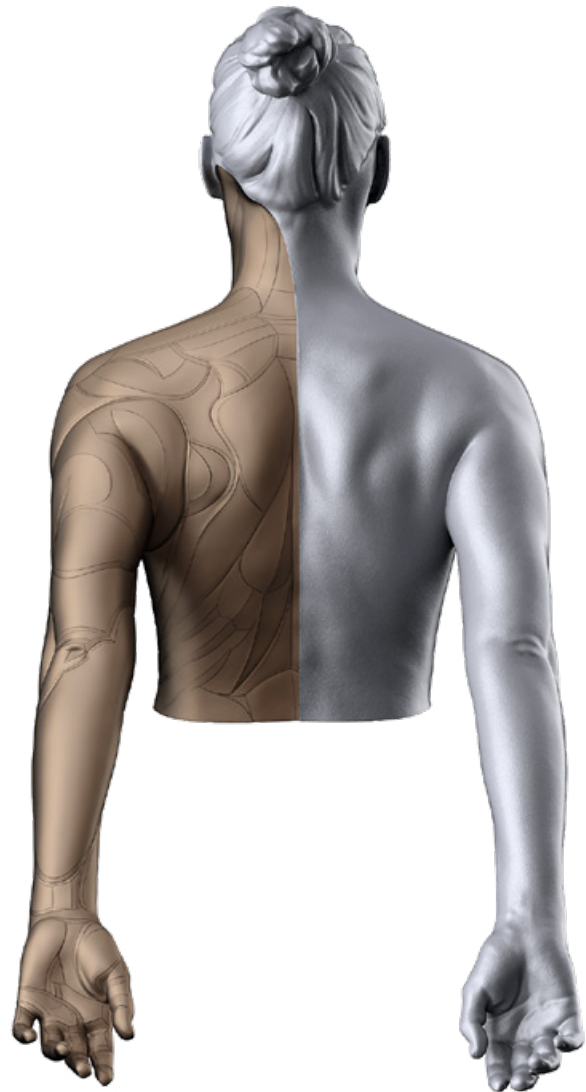


Muscles



FB – Arms back

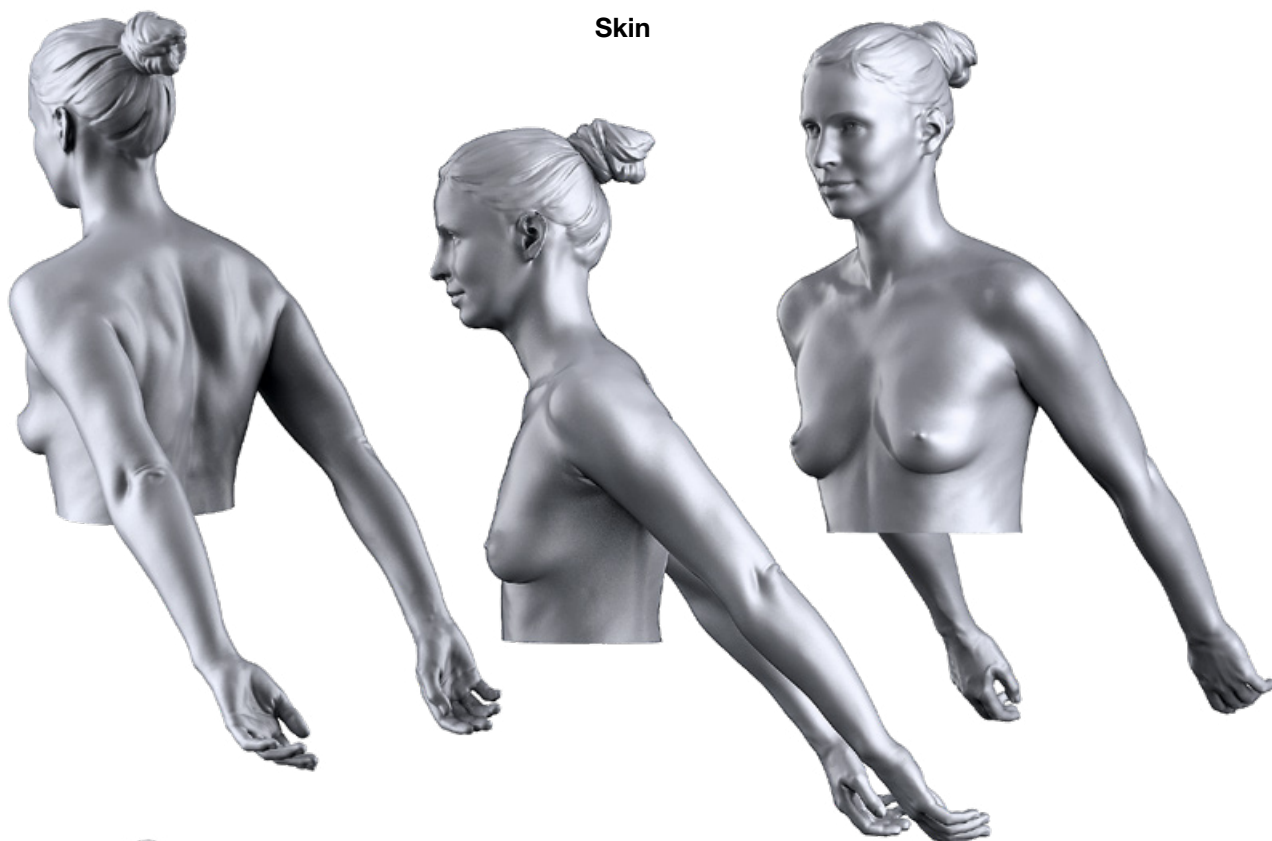
Back

1st level block-out**2nd level block-out**

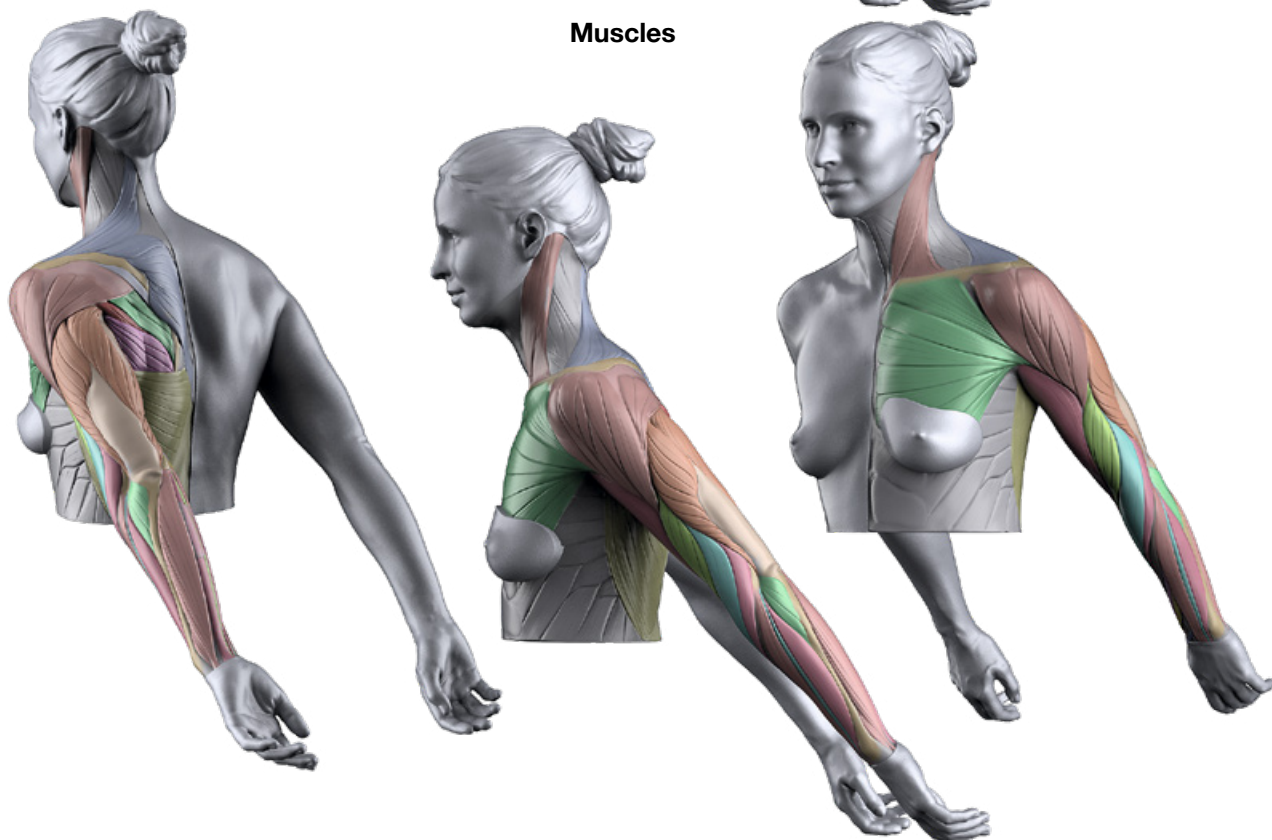
FB – Arms back

Multi-angle

Skin

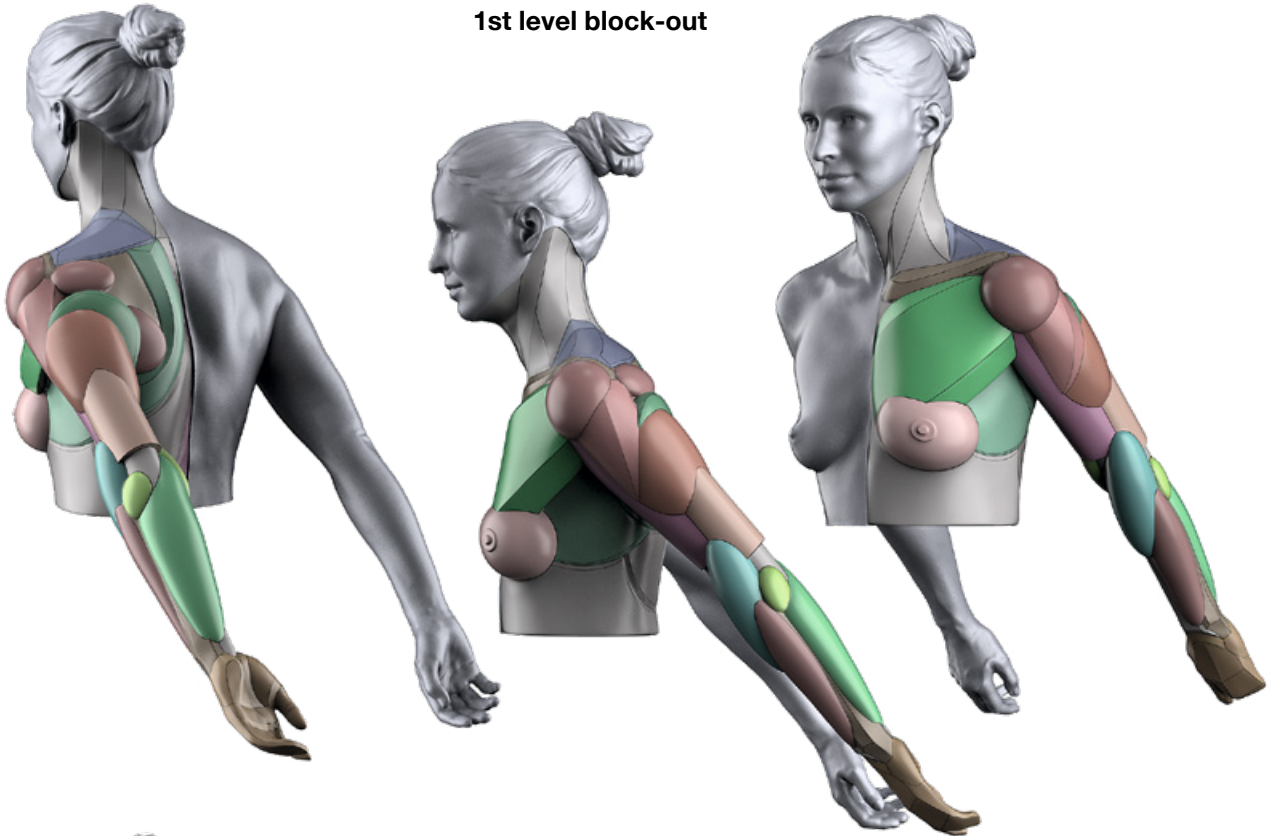
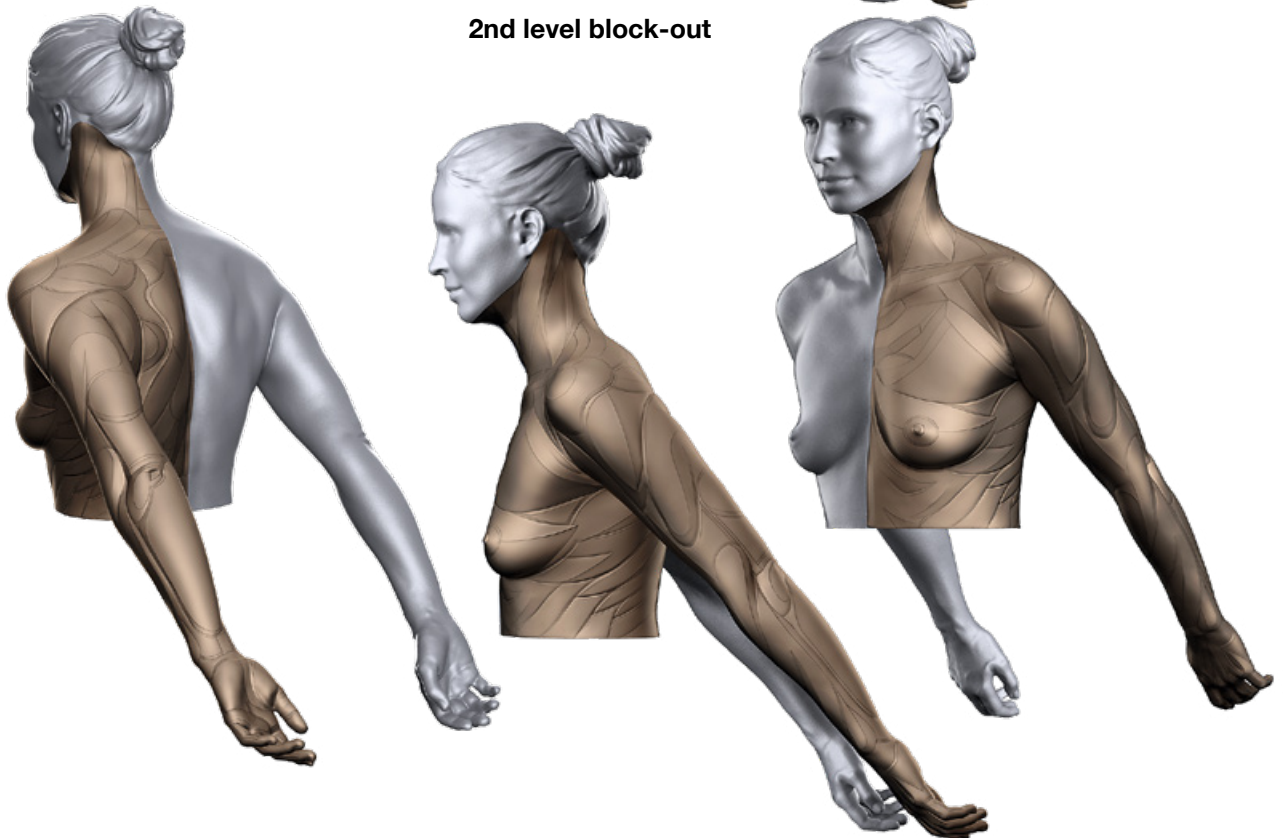


Muscles



FB – Arms back

Multi-angle

1st level block-out**2nd level block-out**

MX – Arms crossed

Skin



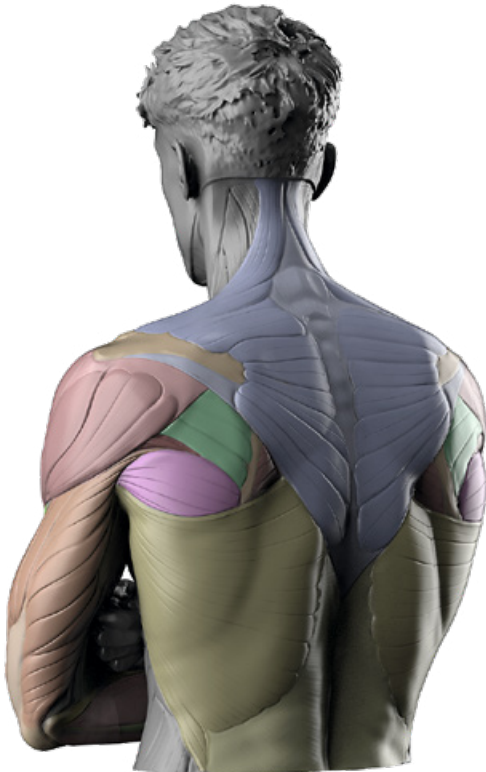
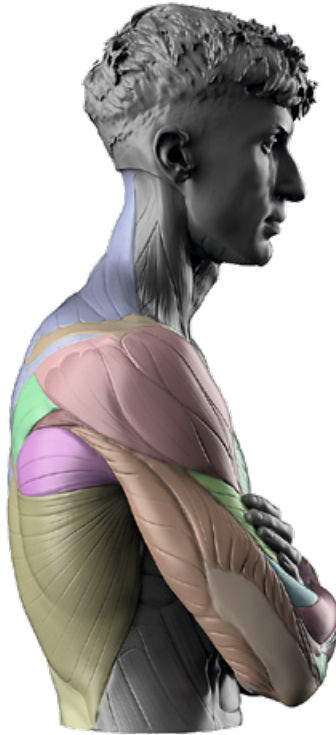
MX – Arms crossed

Skin



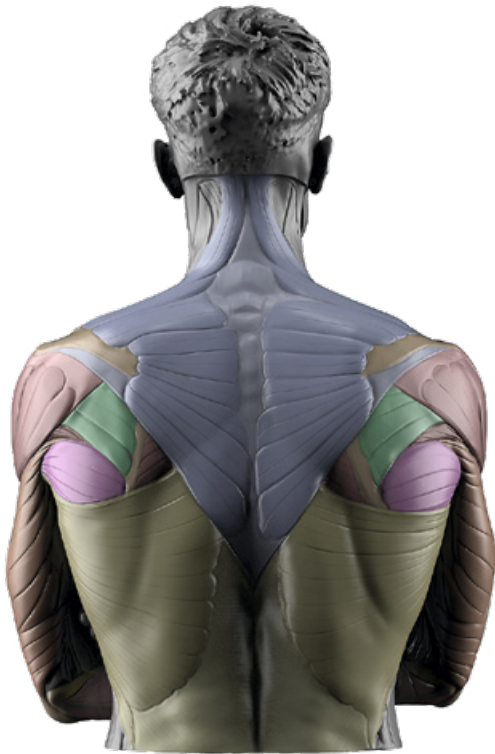
MX – Arms crossed

Muscles



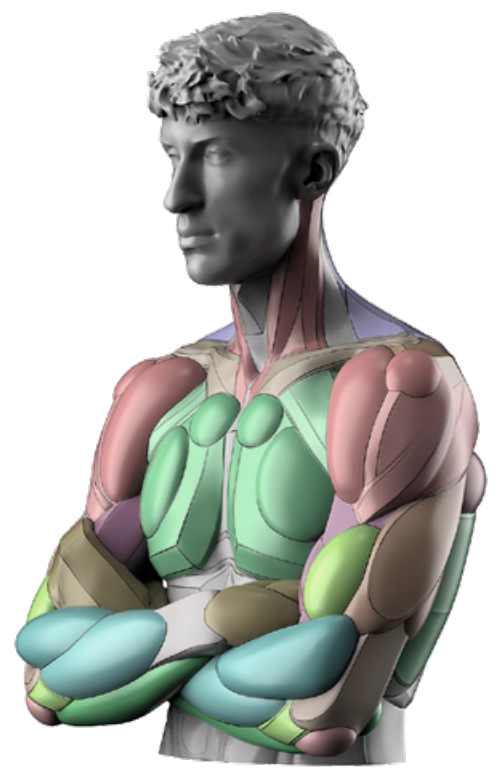
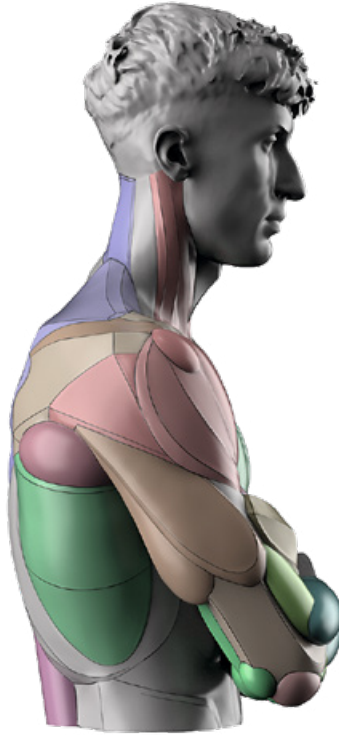
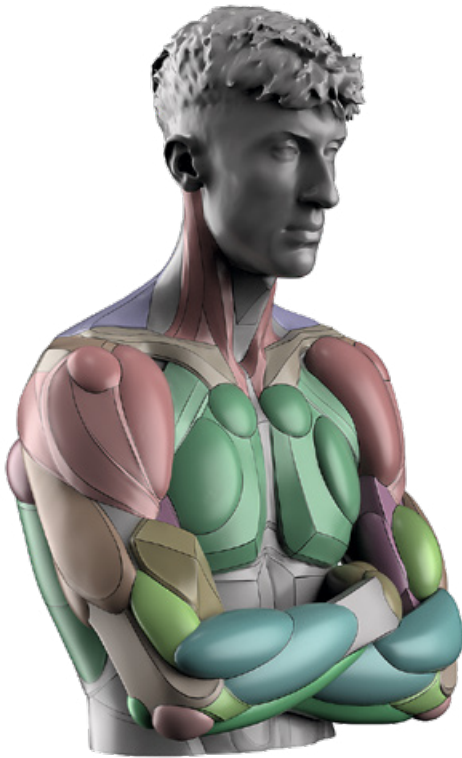
MX – Arms crossed

Muscles



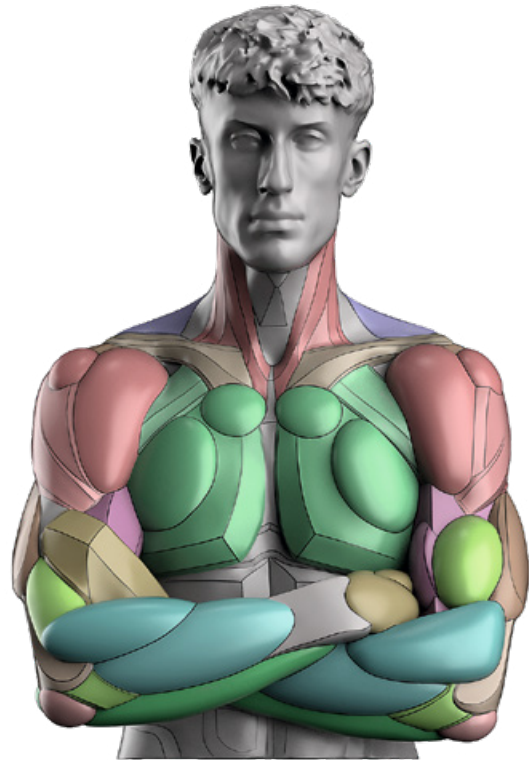
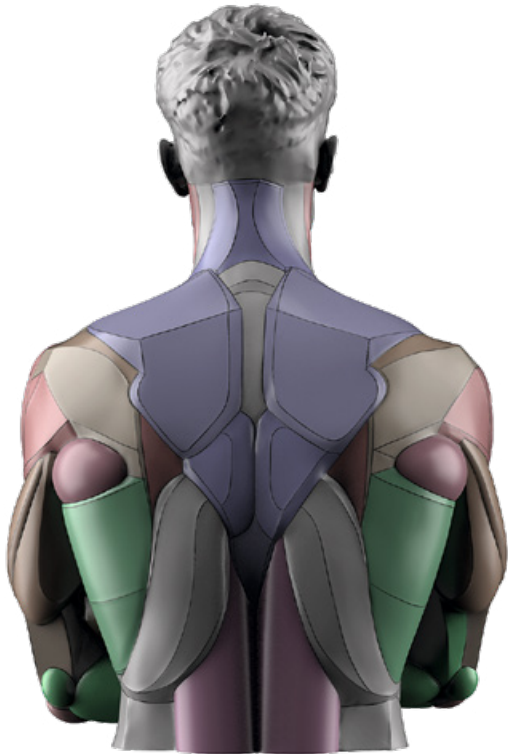
MX – Arms crossed

1st level block-out



MX – Arms crossed

1st level block-out



MX – Arms crossed

2nd level block-out



MX – Arms crossed

2nd level block-out



FX – Arms crossed

Skin



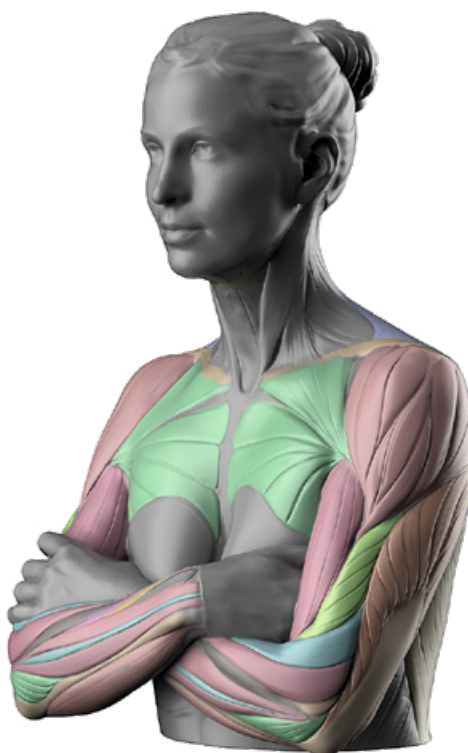
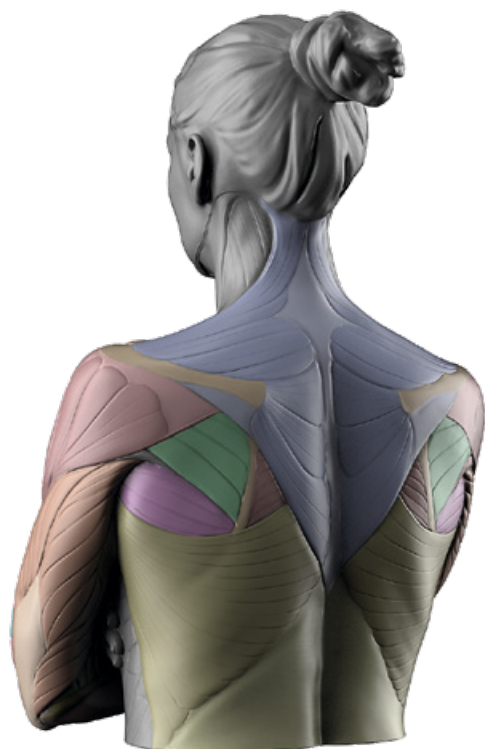
FX – Arms crossed

Skin



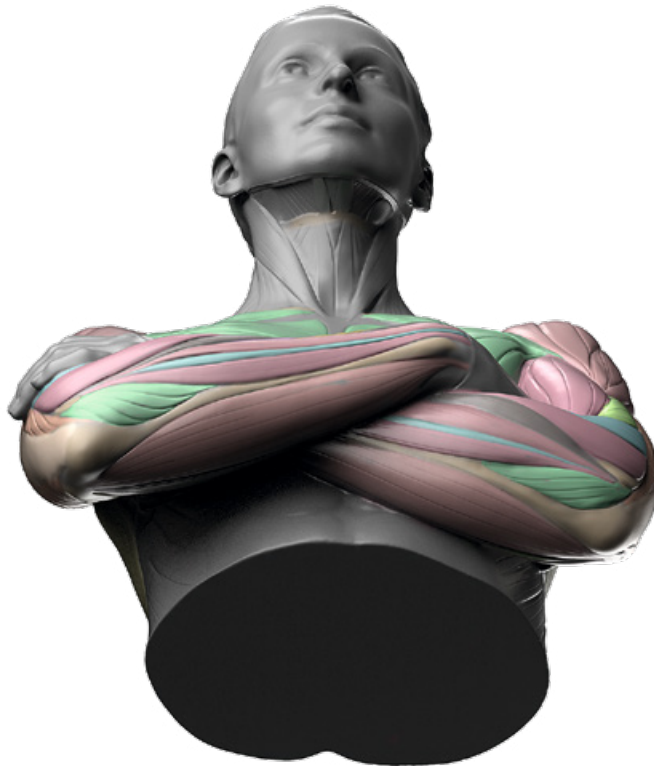
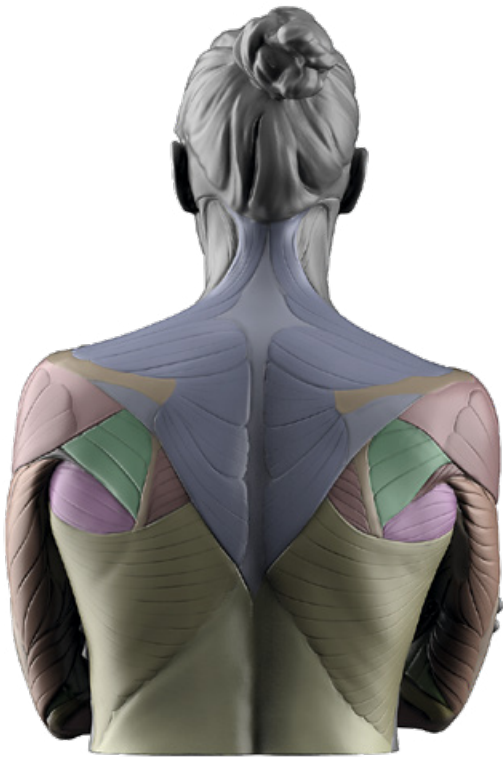
FX – Arms crossed

Muscles



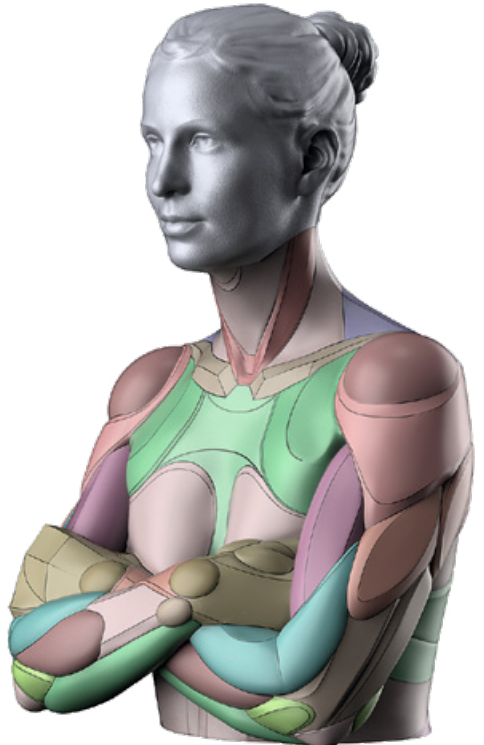
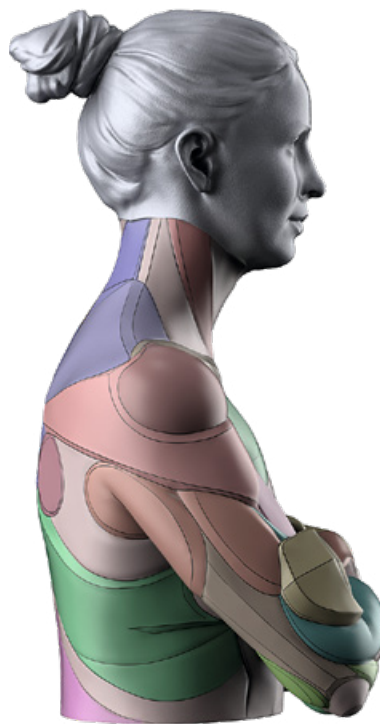
FX – Arms crossed

Muscles



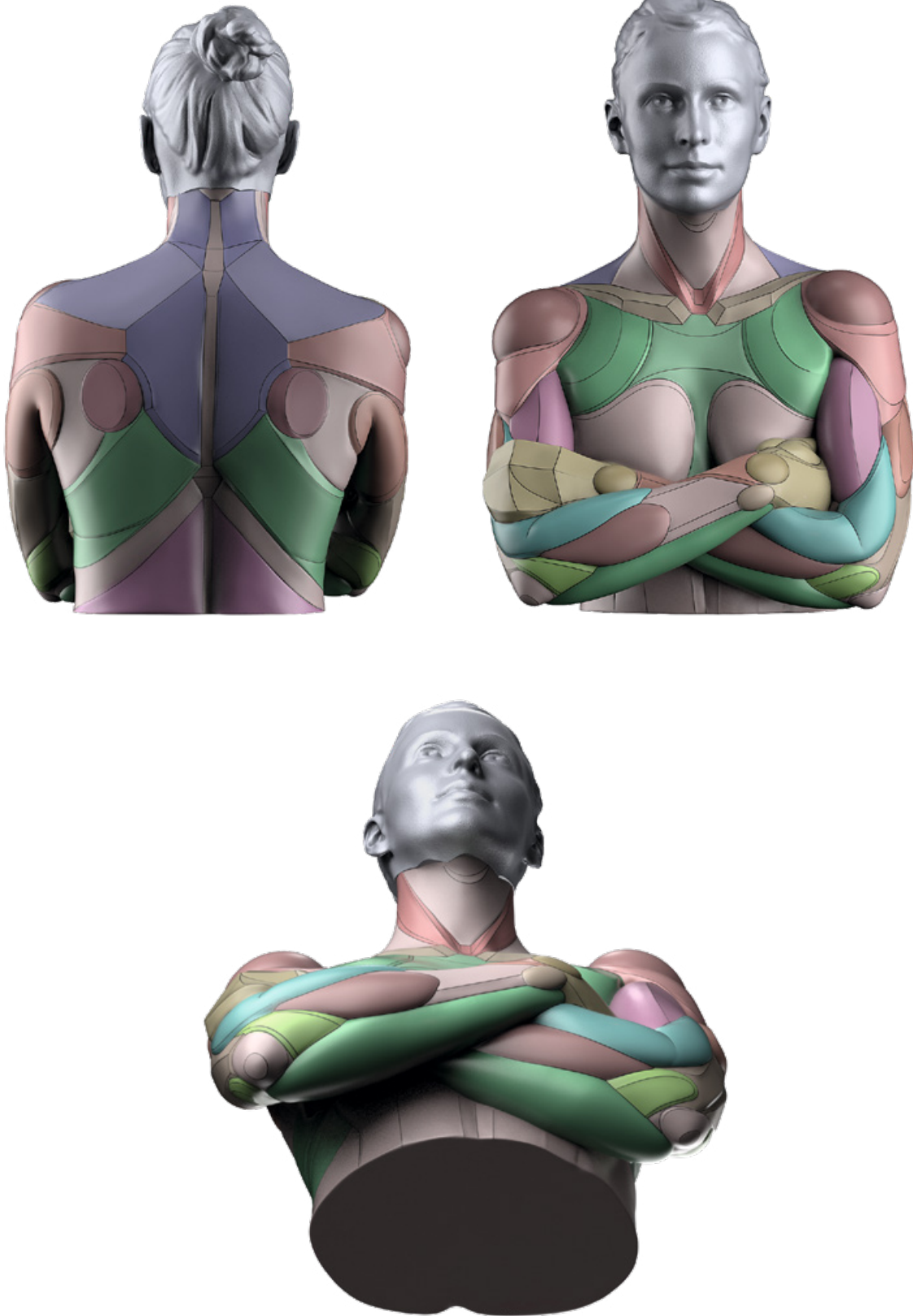
FX – Arms crossed

1st level block-out



FX – Arms crossed

1st level block-out



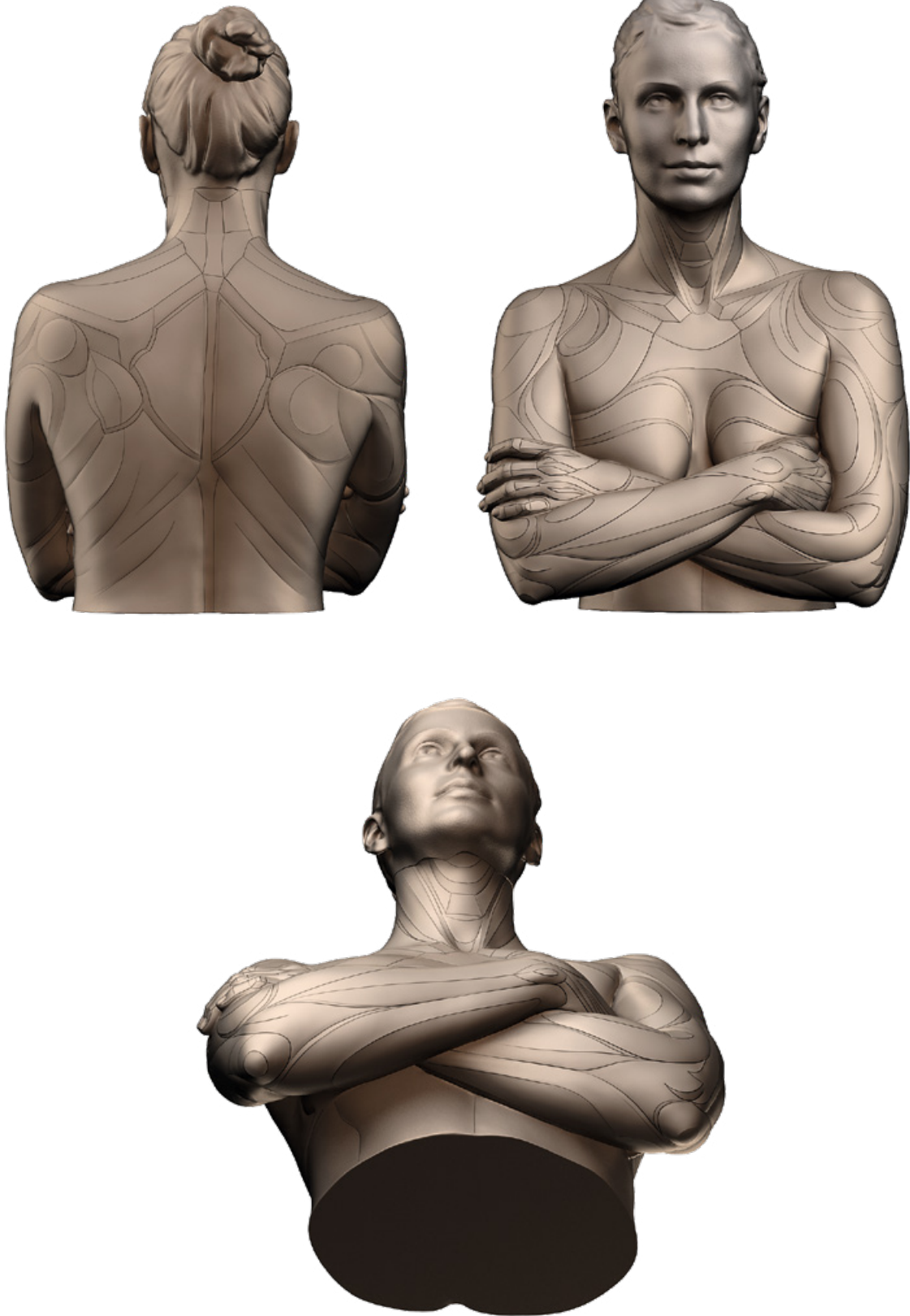
FX – Arms crossed

2nd level block-out



FX – Arms crossed

2nd level block-out



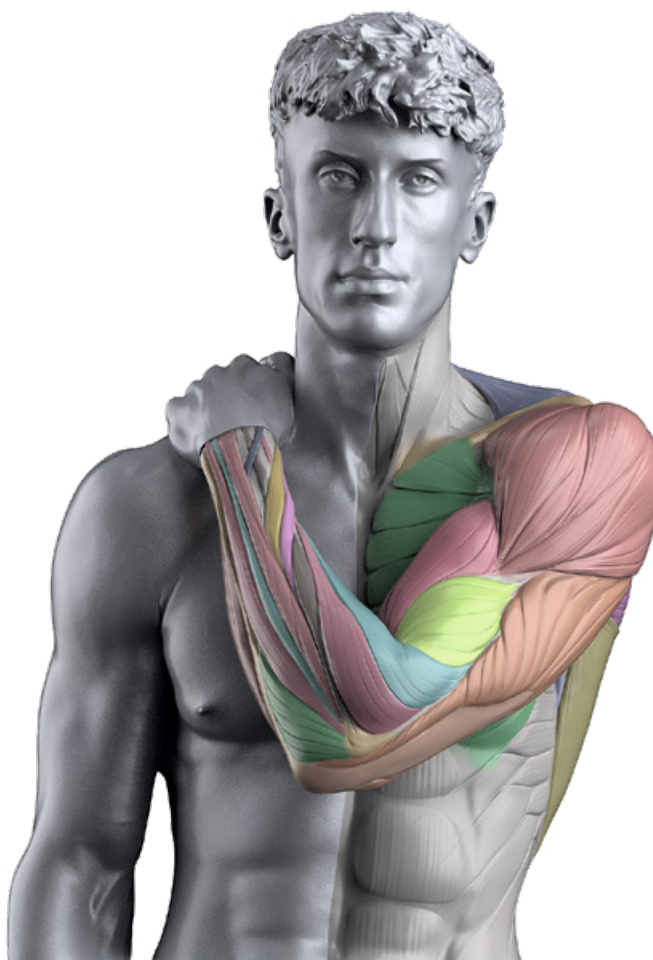
MZ – Self-hug

Front

Skin



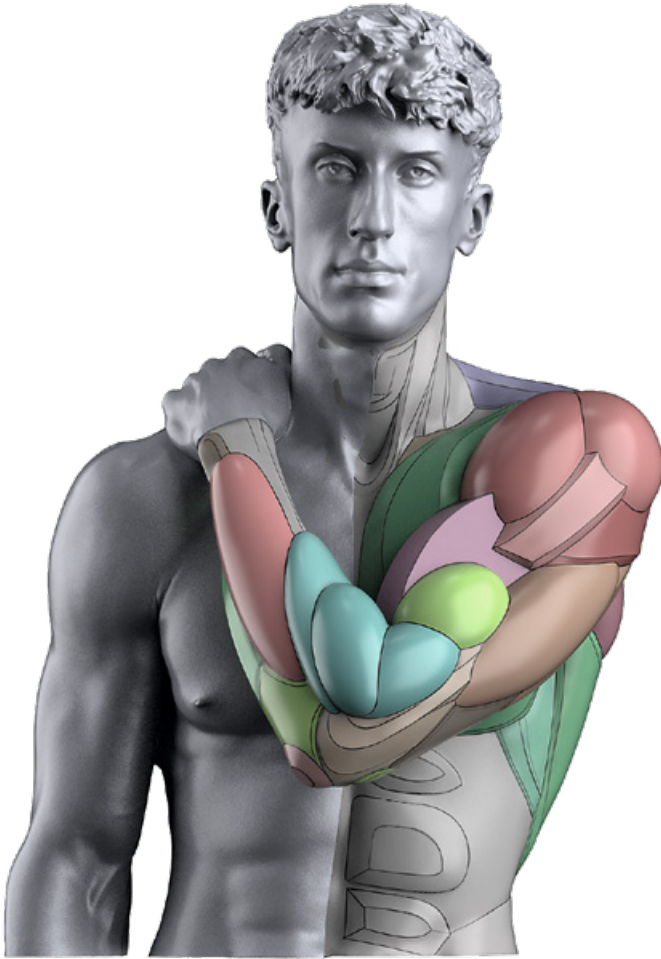
Muscles



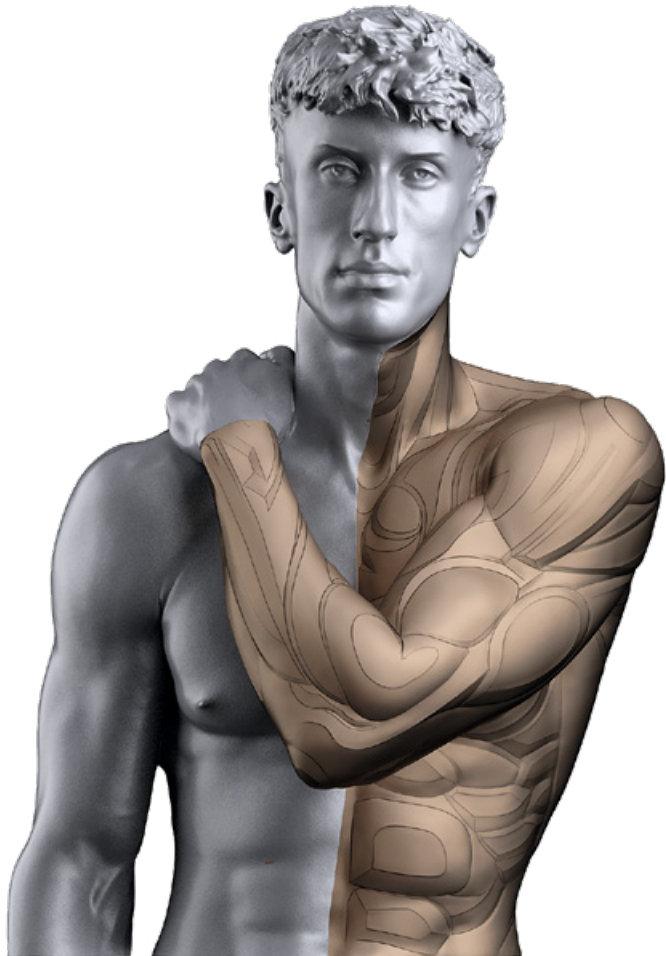
MZ – Self-hug

Front

1st level block-out



2nd level block-out



MZ – Self-hug

Back

Skin



Muscles



MZ – Self-hug

Back

1st level block-out



2nd level block-out



MZ – Self-hug

Multi-angle

Skin



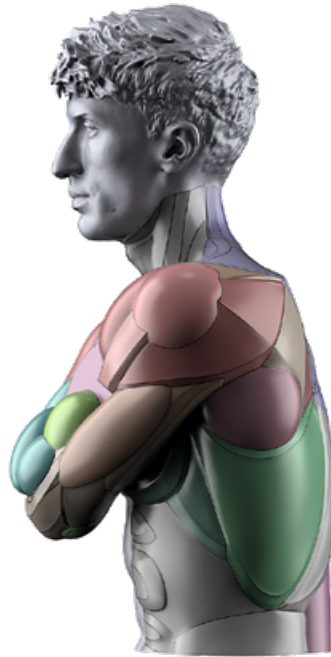
Muscles



MZ – Self-hug

Multi-angle

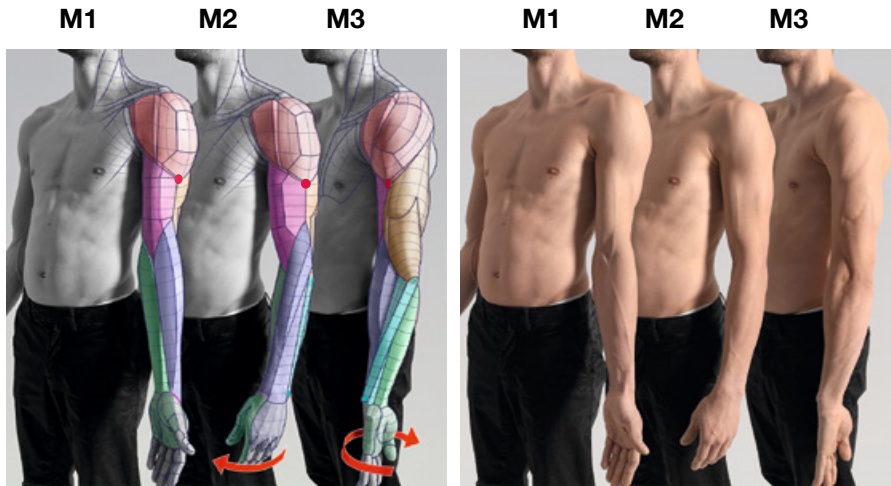
1st level block-out



2nd level block-out



FOREARM SUPINATION AND PRONATION



Pronation (M3, F3, M4, M7, M10, F10, M13, F13)

When you turn your hand so the palm faces down (or backward if your arm is extended), that's pronation. However, "pure pronation" refers to using only the forearm without involving the shoulder (glenohumeral joint). In this movement, the key mechanism is the radius rotating over the ulna, while the upper arm and shoulder remain stable.

In poses M3 and M4, there is moderate to significant shoulder joint rotation. Therefore, this pronation cannot be considered "pure." The signs supporting this are: (1) elbow rotation, and (2) the deltoid insertion (DI) shifting toward the front (M2, M3) or even medially (M4).

Supination (M1, F1, M5, M8, F8, M11, F11)

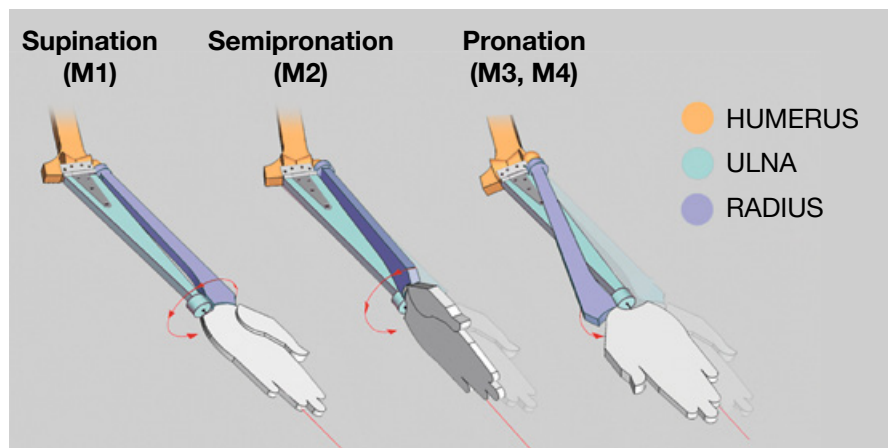
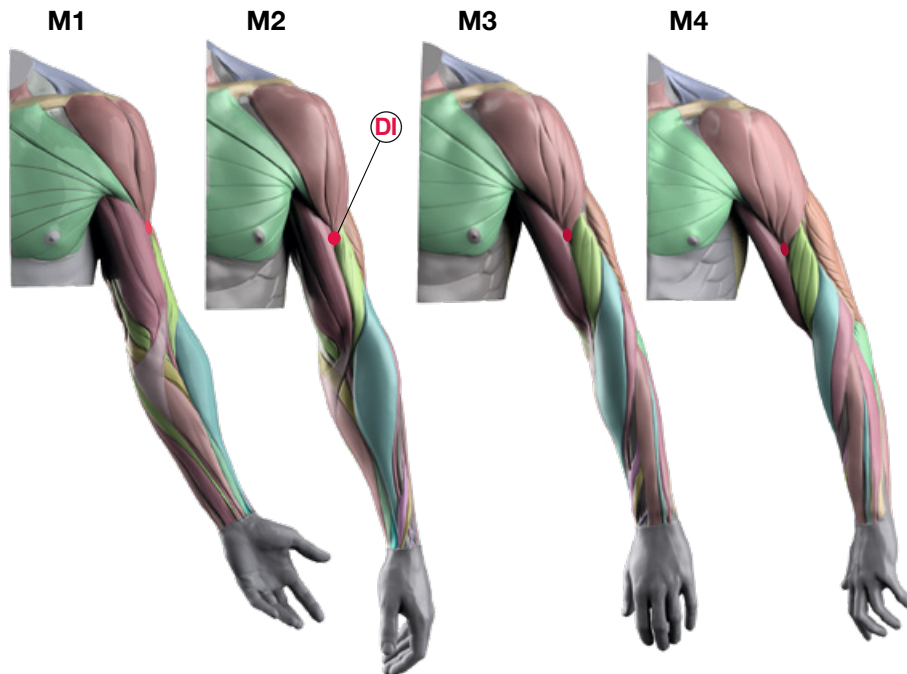
When you turn your hand so the palm faces up (like holding a bowl of soup), that's supination. If your arm hangs straight down at your side, supination means the palm faces forward.

Anatomy

Two forearm bones, the **radius** and **ulna**, are involved. During pronation (M3, M4), the radius rotates around the ulna.

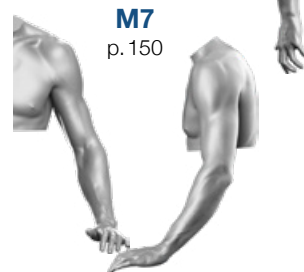
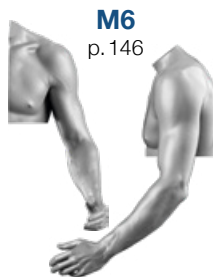
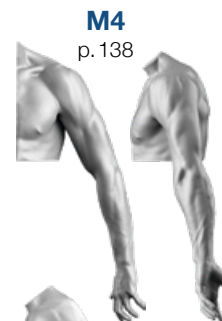
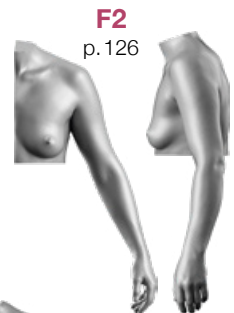
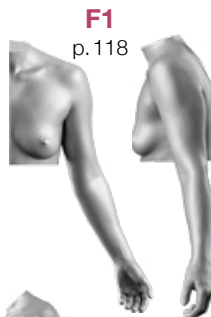
Form

The form of the arm is largely determined by muscle positioning. Understanding the origins (where a muscle starts) and insertions (where it attaches to another bone) is critical for grasping how the forearm changes during pronation and supination.



FOREARM AND ELBOW MOVEMENTS

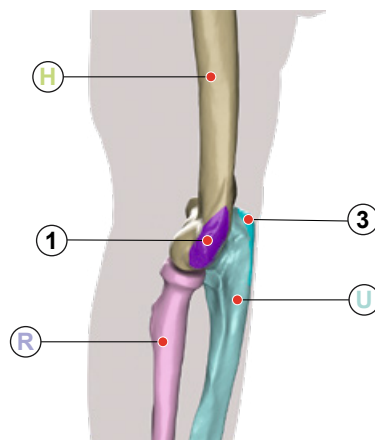
Pose catalogue



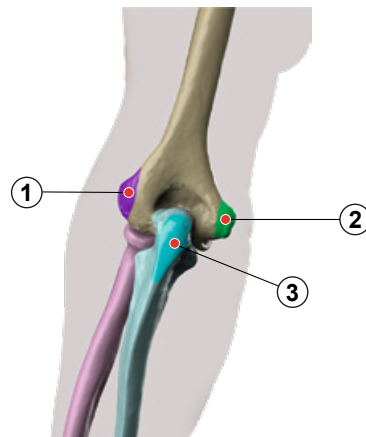
ELBOW ANATOMY

Bony landmarks of the elbow

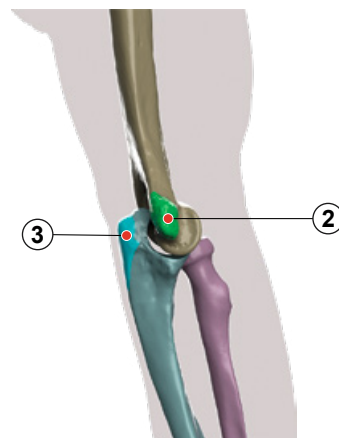
LEFT ARM LATERAL VIEW



LEFT ARM BACK



LEFT ARM MEDIAL VIEW



H Humerus

R Radius

U Ulna

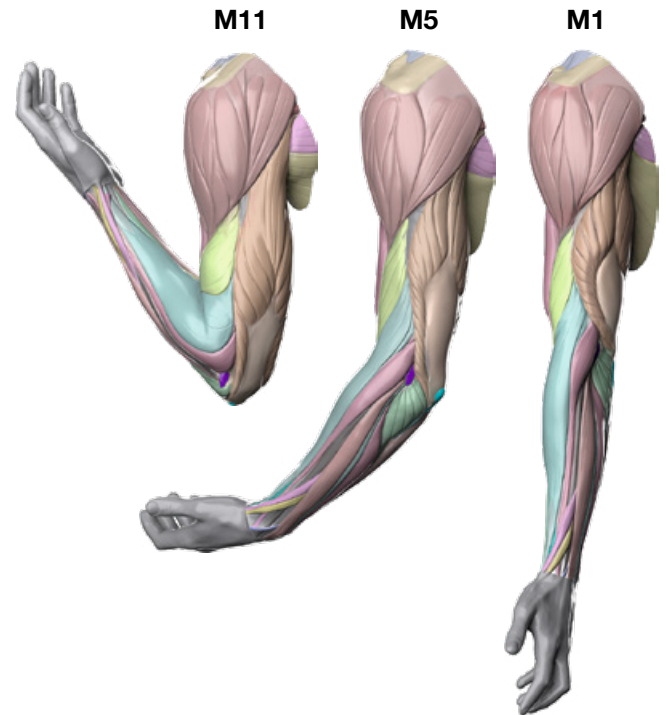
1 Lateral epicondyle (humerus)

2 Medial epicondyle (humerus)

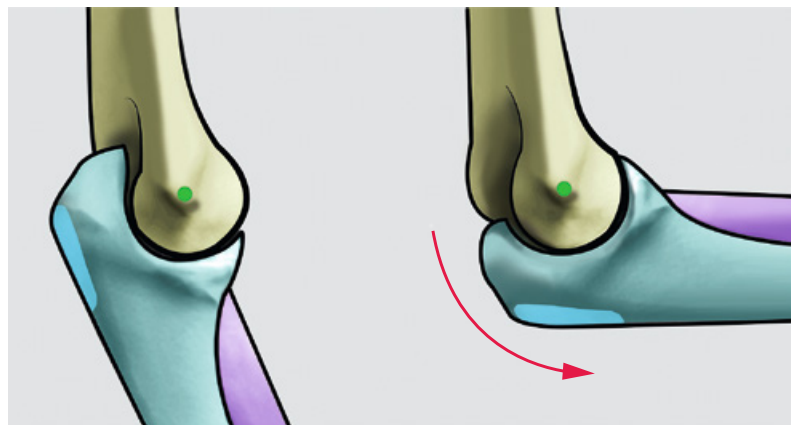
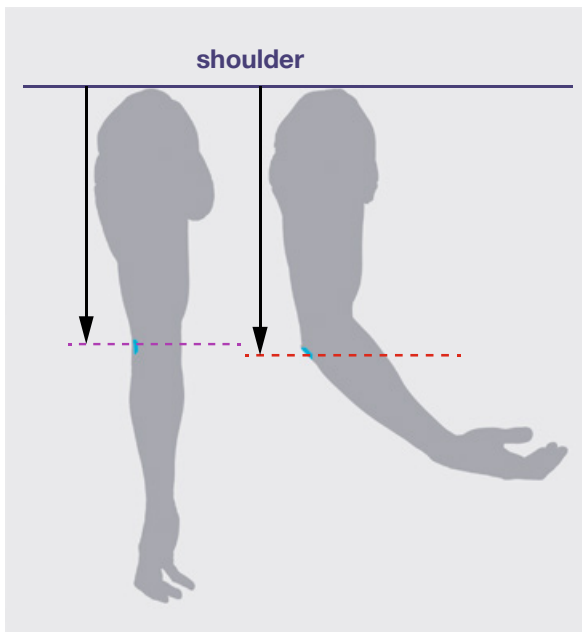
3 Olecranon process (ulna)

ELBOW ANATOMY

Bending the elbow

LEFT ARM MEDIAL VIEW**LEFT ARM LATERAL VIEW**

ELBOW MOVEMENT

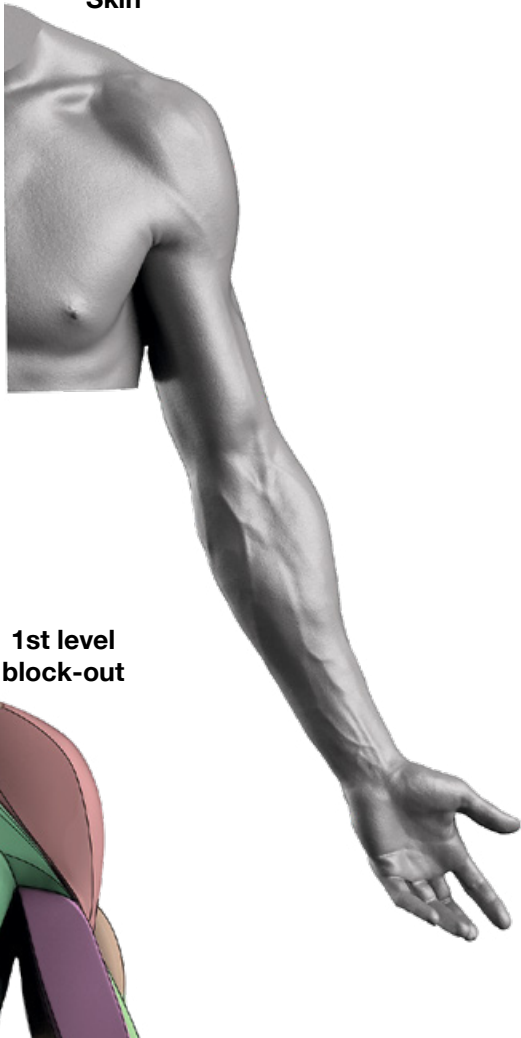


When you bend your arm, the distance from your shoulder to your **elbow tip** gets a little longer. This happens because the elbow tip is part of the forearm, and as you bend the arm, it moves in an arc away from the upper arm. The change is small – usually around 5 to 15 millimeters – and depends on a person's size and how much the elbow is bent.

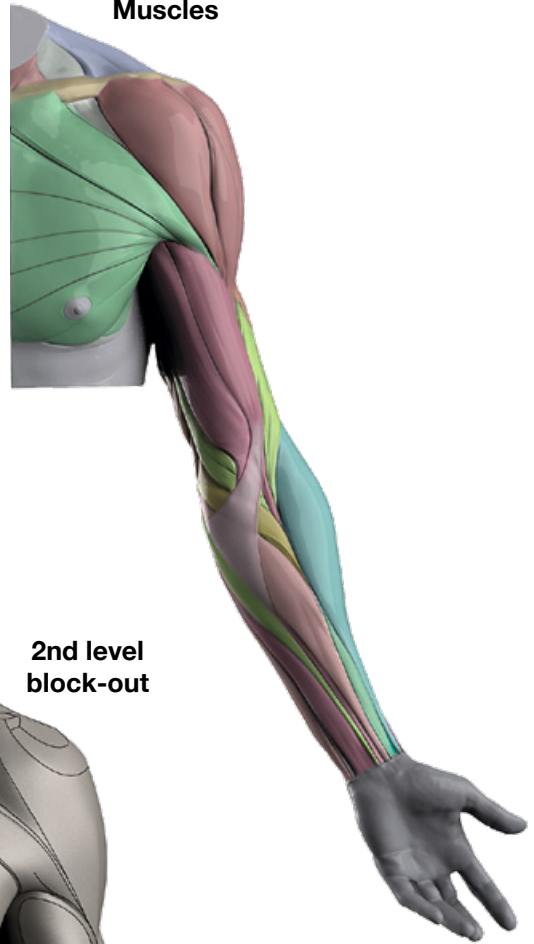
M1 – Straight supinated arm

Front

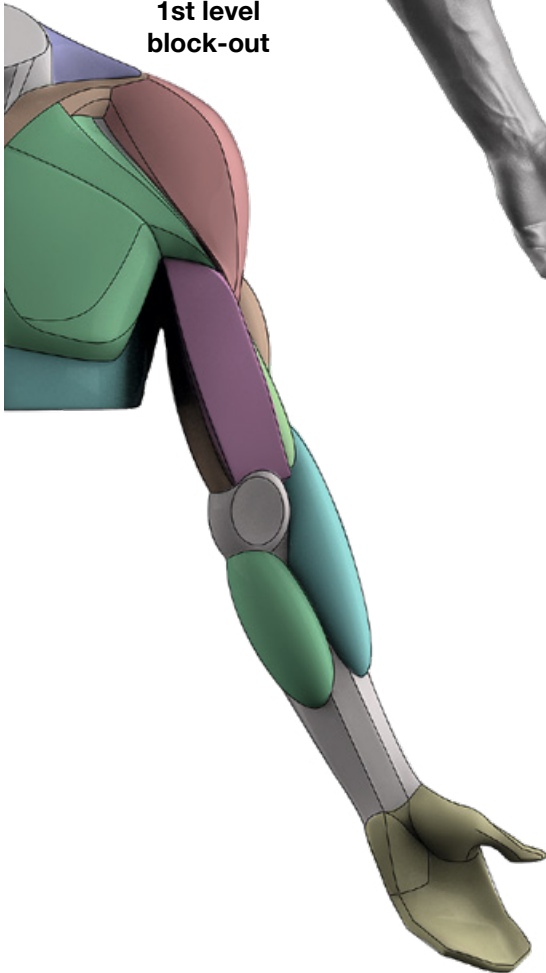
Skin



Muscles



1st level
block-out

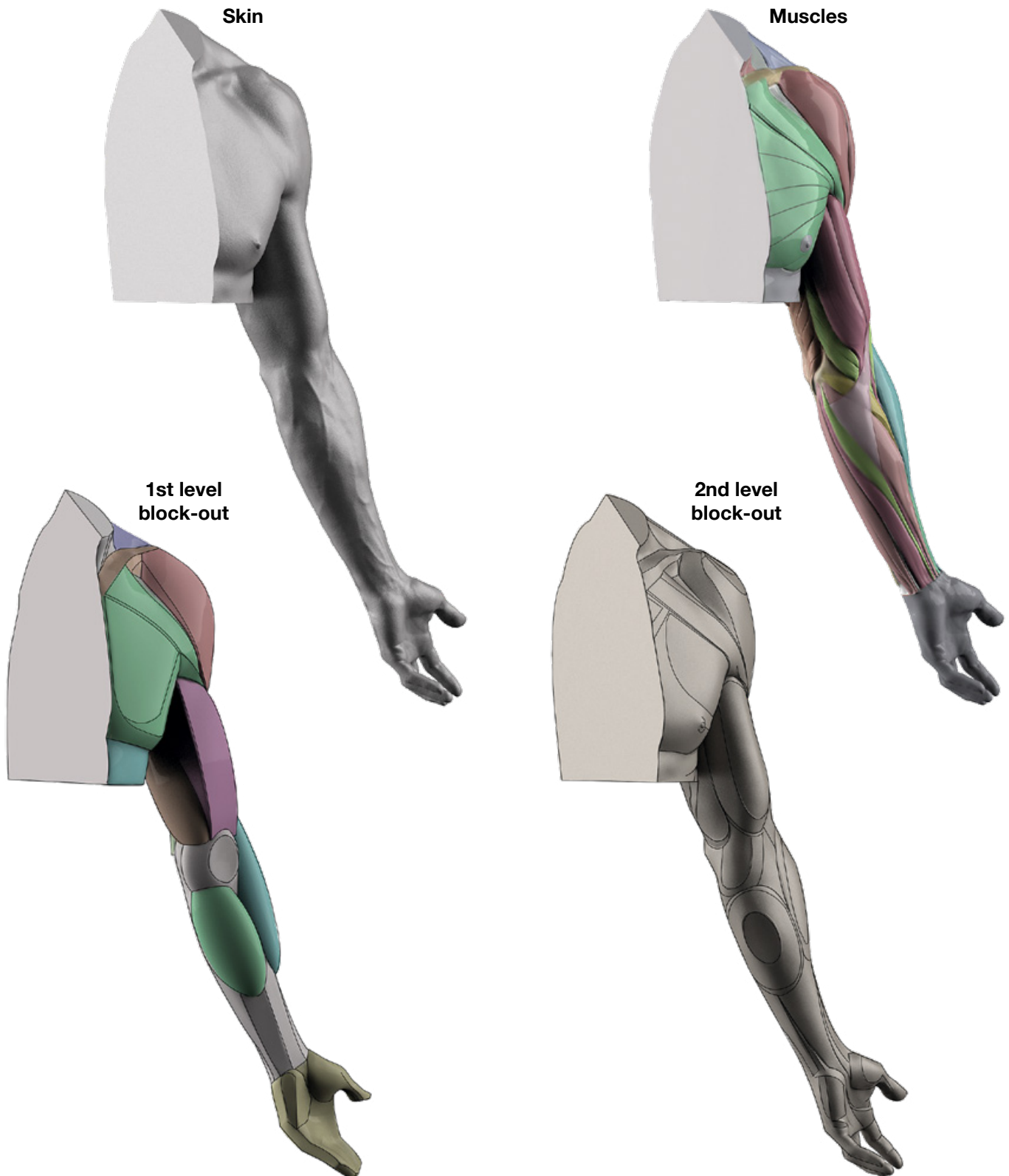


2nd level
block-out



M1 – Straight supinated arm

Medial view



M1 – Straight supinated arm

Lateral view

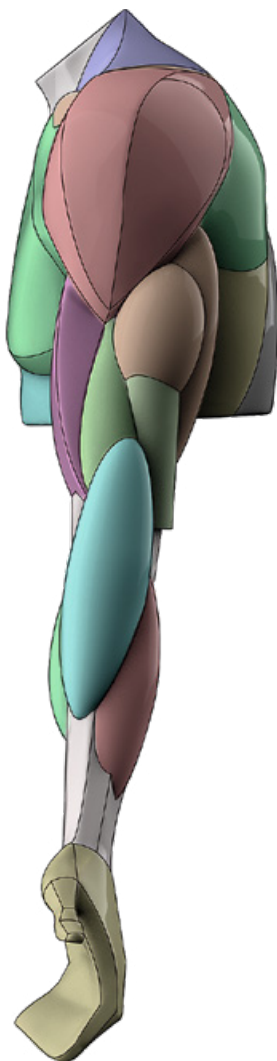
Skin



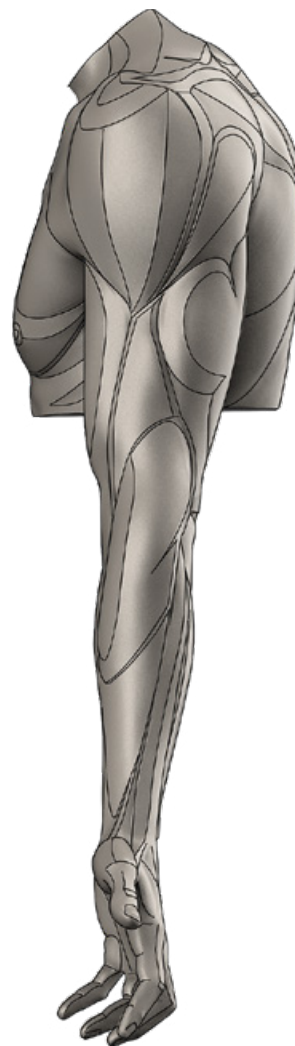
Muscles



1st level
block-out



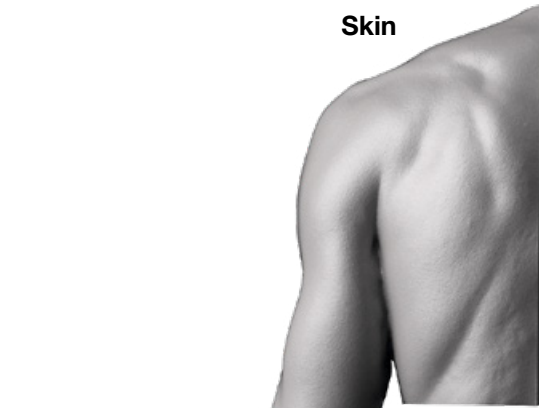
2nd level
block-out



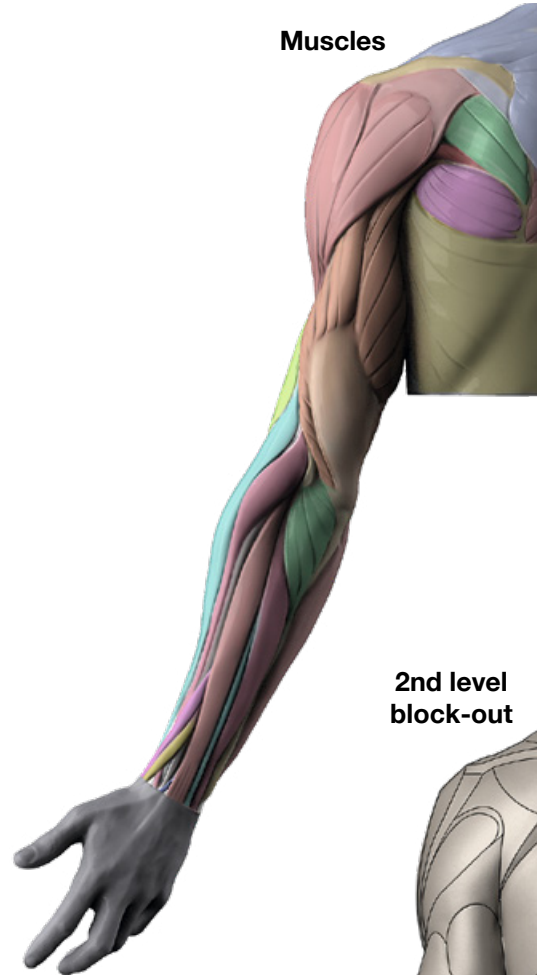
M1 – Straight supinated arm

Back

Skin



Muscles



1st level
block-out



2nd level
block-out



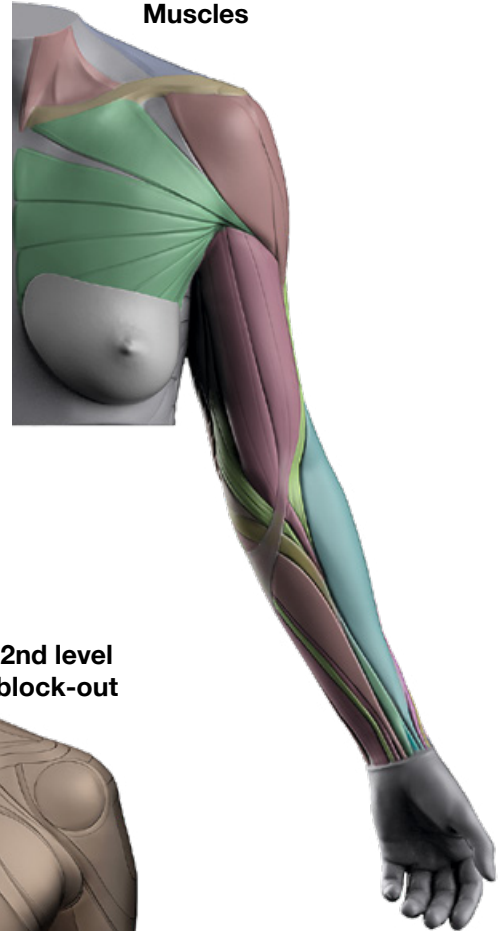
F1 – Straight supinated arm

Front

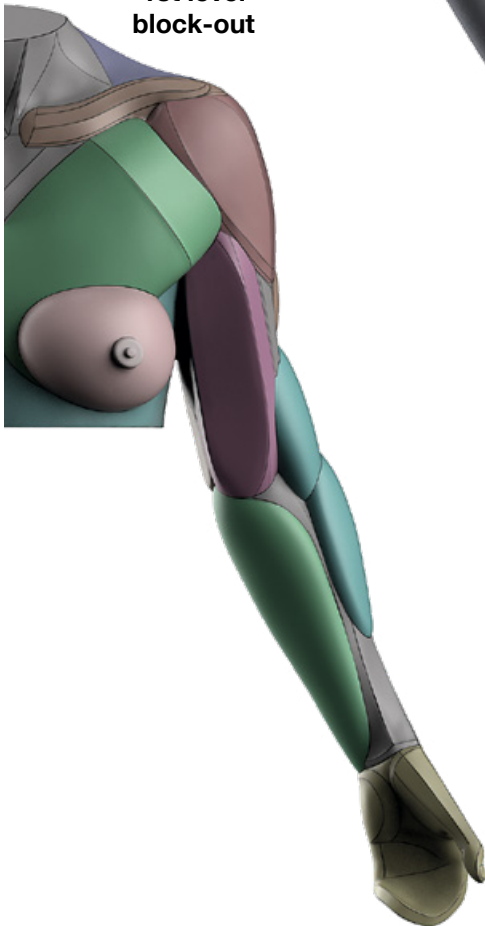
Skin



Muscles



1st level
block-out

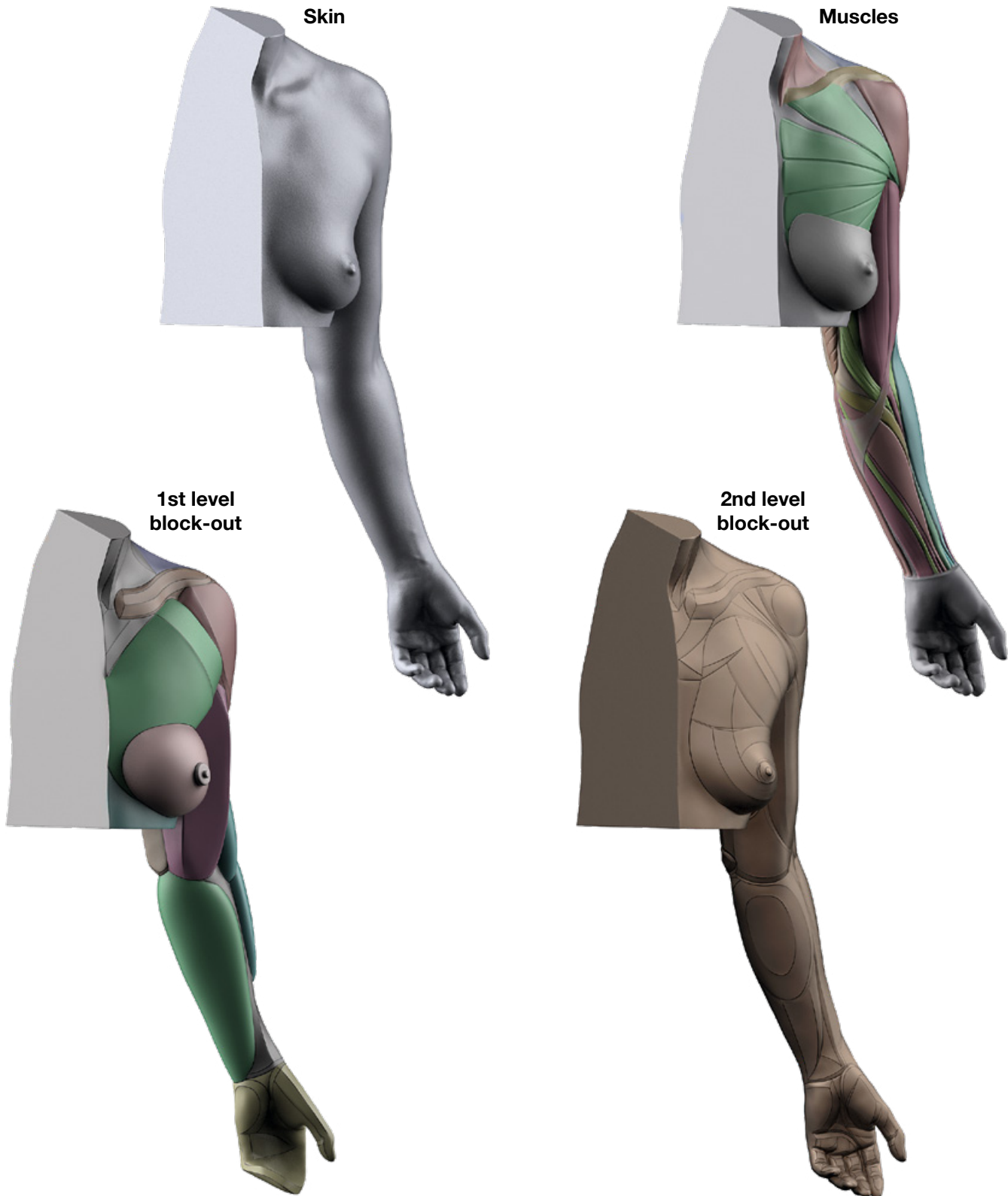


2nd level
block-out



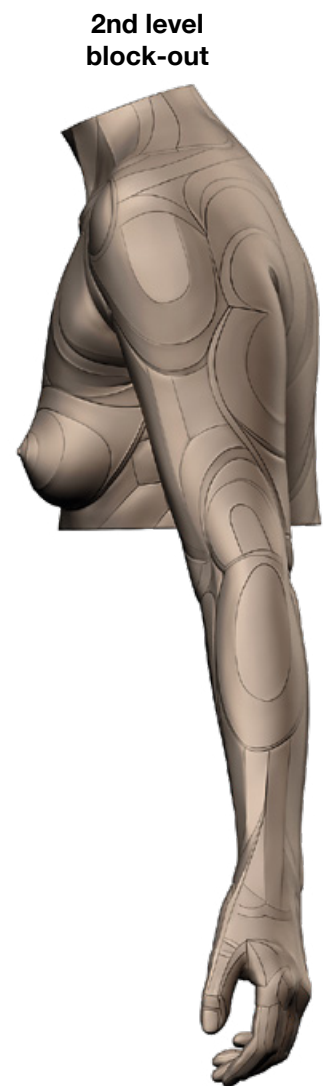
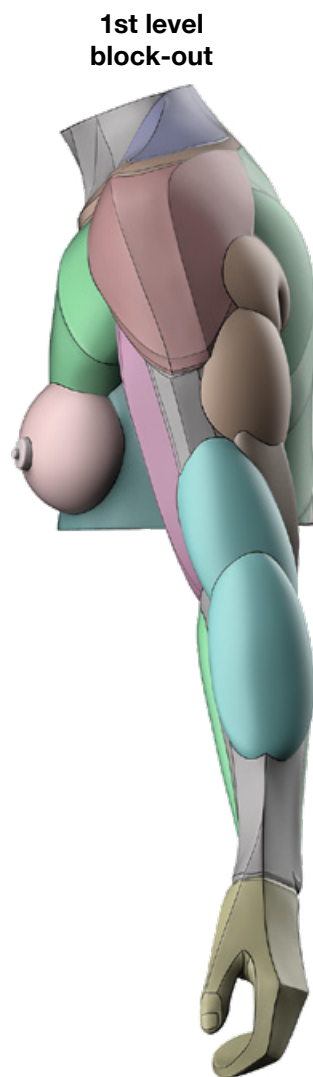
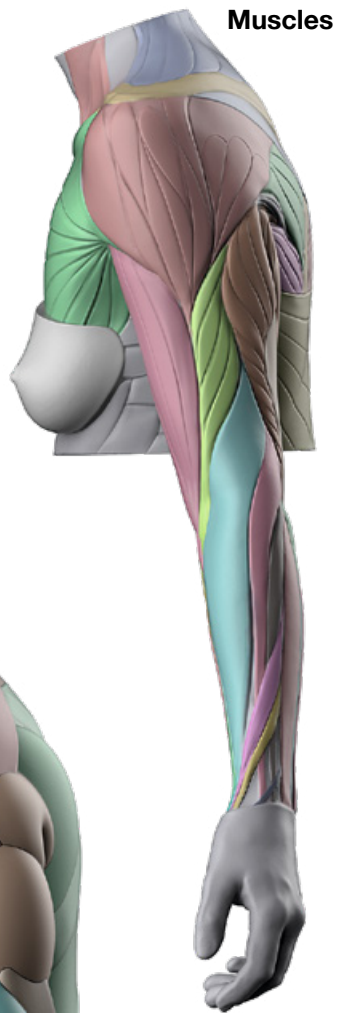
F1 – Straight supinated arm

Medial view



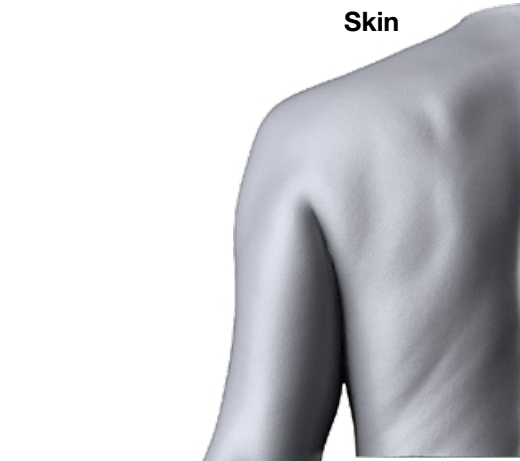
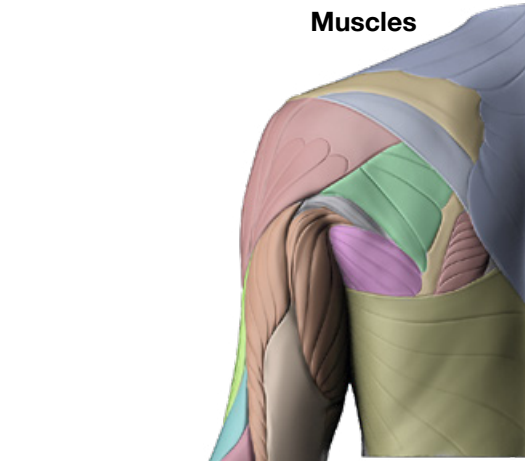
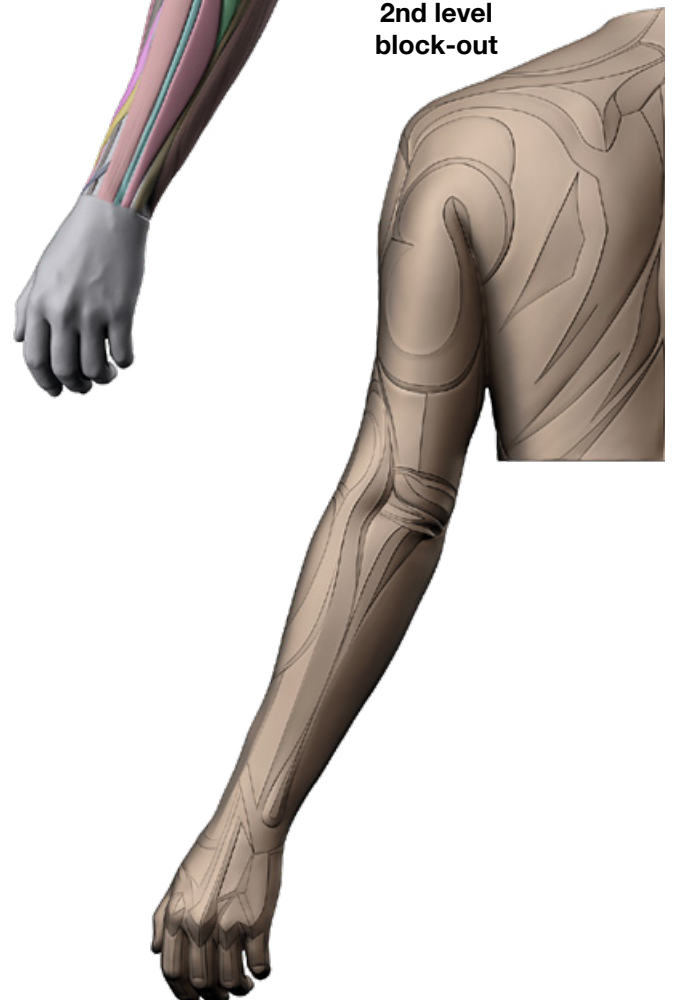
F1 – Straight supinated arm

Lateral view



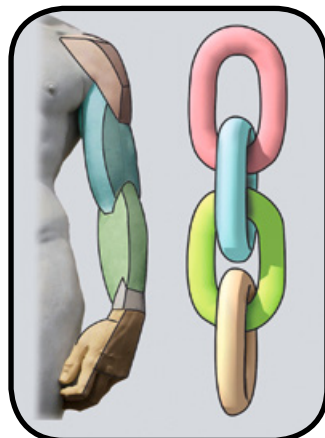
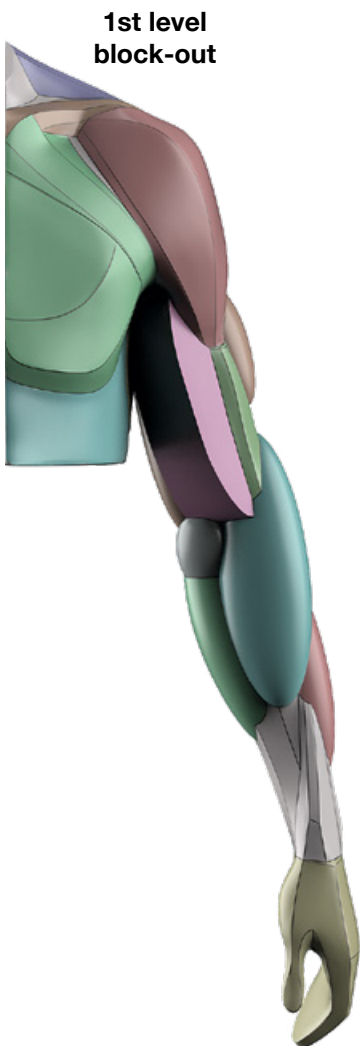
F1 – Straight supinated arm

Back

Skin**Muscles****1st level
block-out****2nd level
block-out**

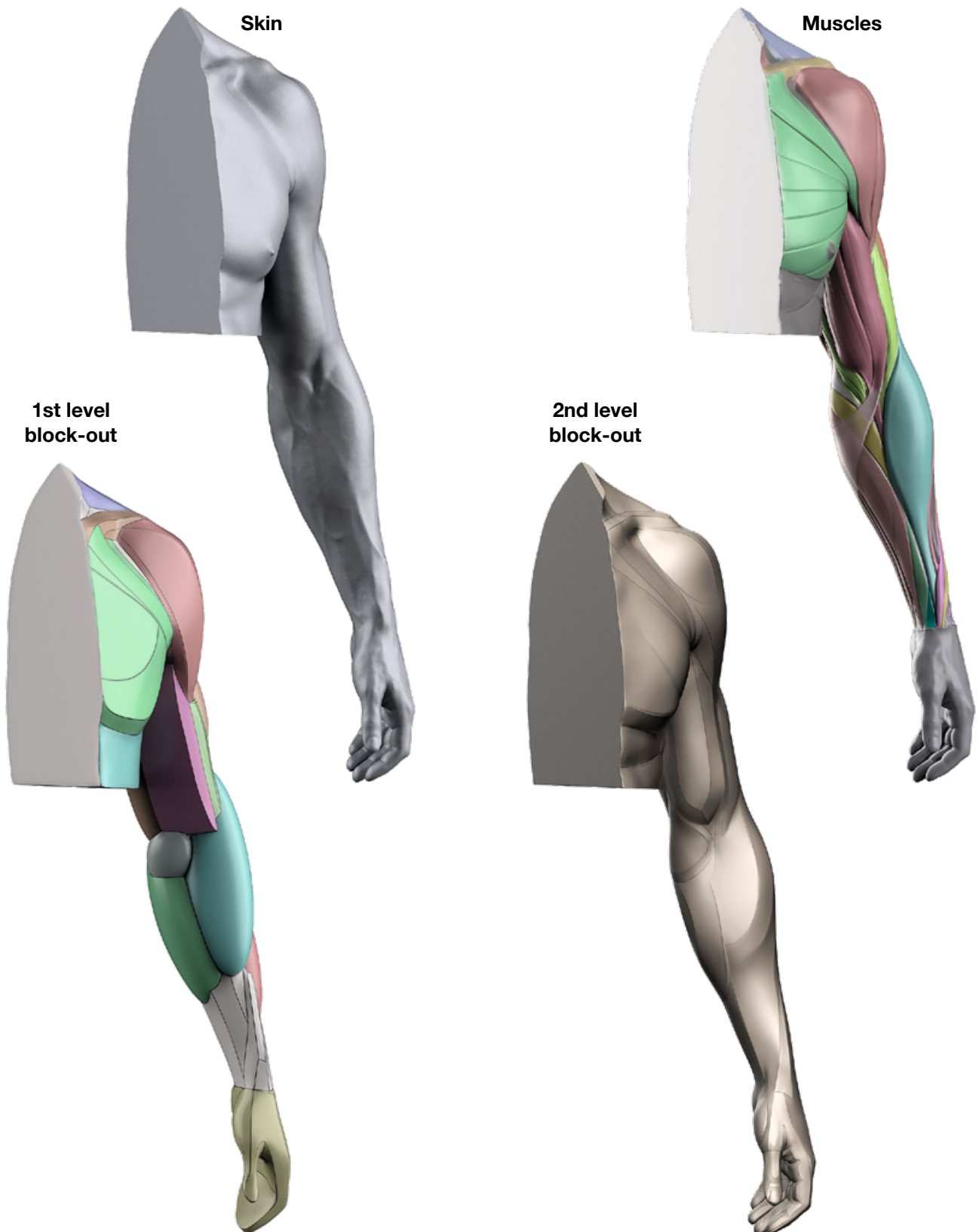
M2 – Straight neutral arm

Front



M2 – Straight neutral arm

Medial view



M2 – Straight neutral arm

Lateral view

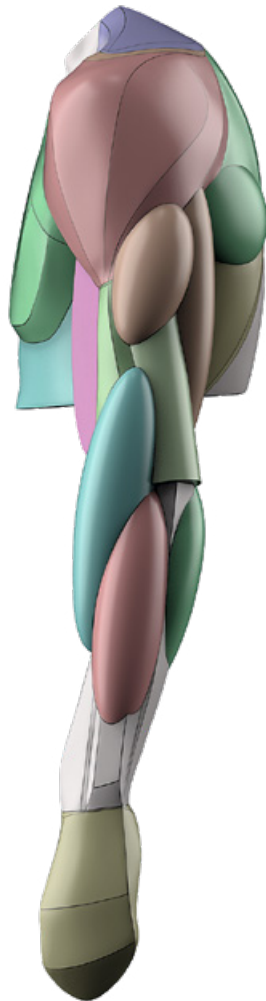
Skin



Muscles



**1st level
block-out**



**2nd level
block-out**



M2 – Straight neutral arm

Back

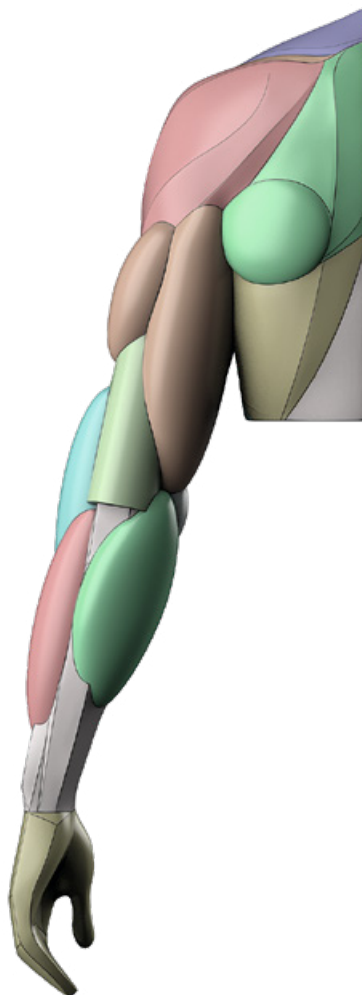
Skin



Muscles



1st level
block-out



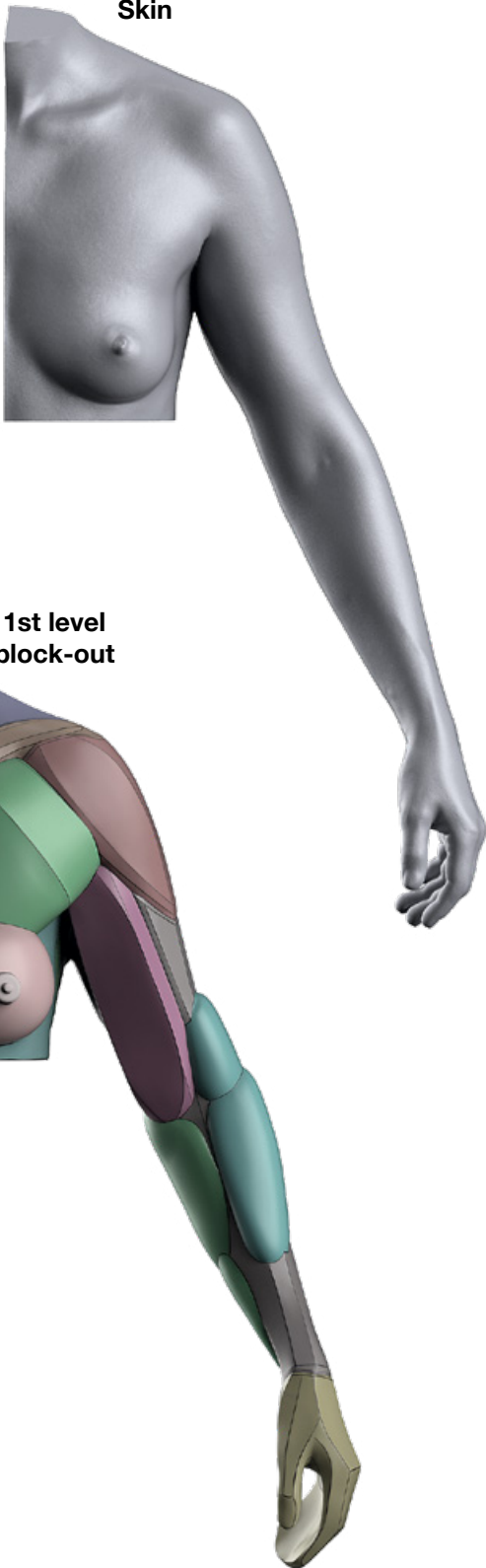
2nd level
block-out



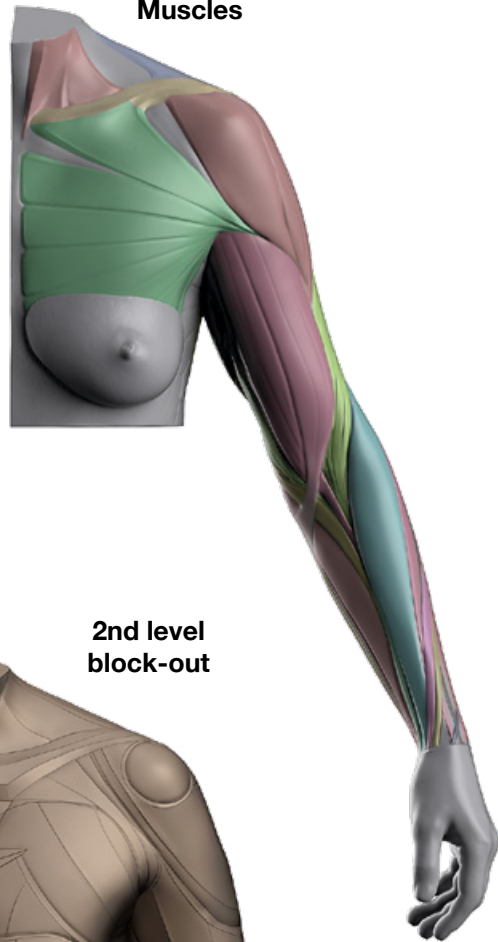
F2 – Straight neutral arm

Front

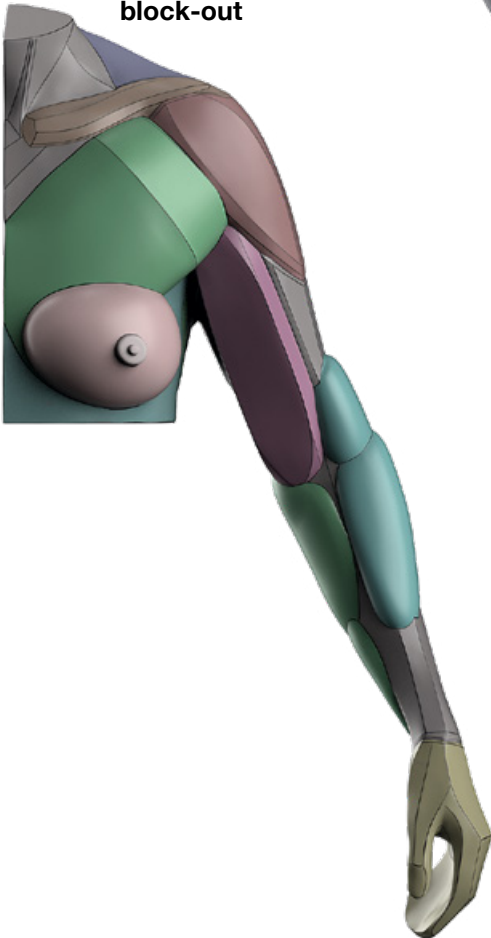
Skin



Muscles



1st level
block-out



2nd level
block-out



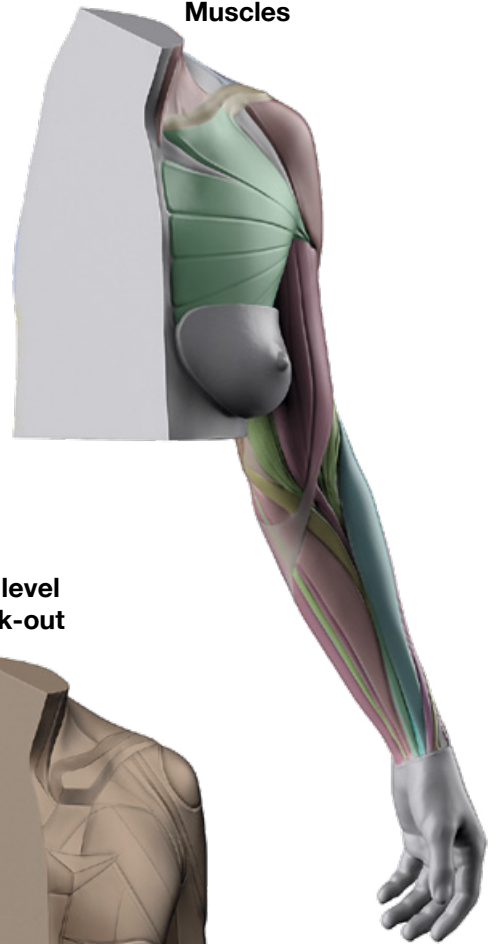
F2 – Straight neutral arm

Medial view

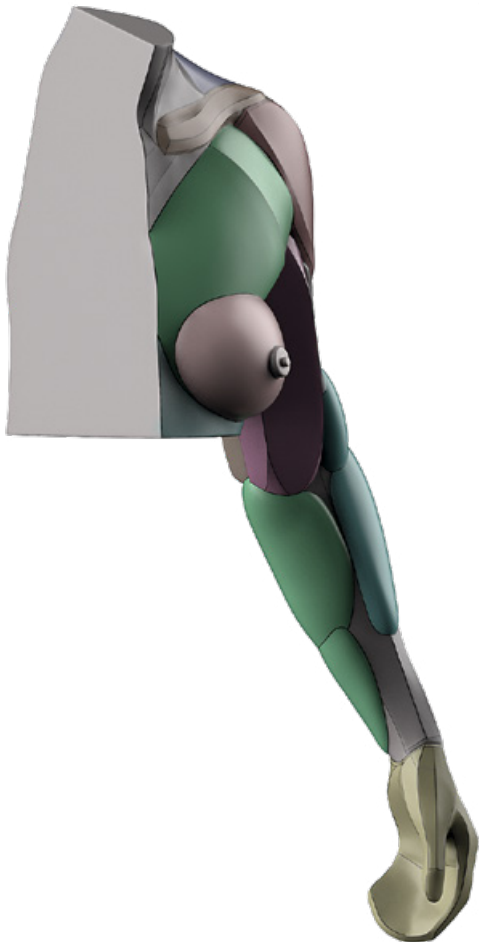
Skin



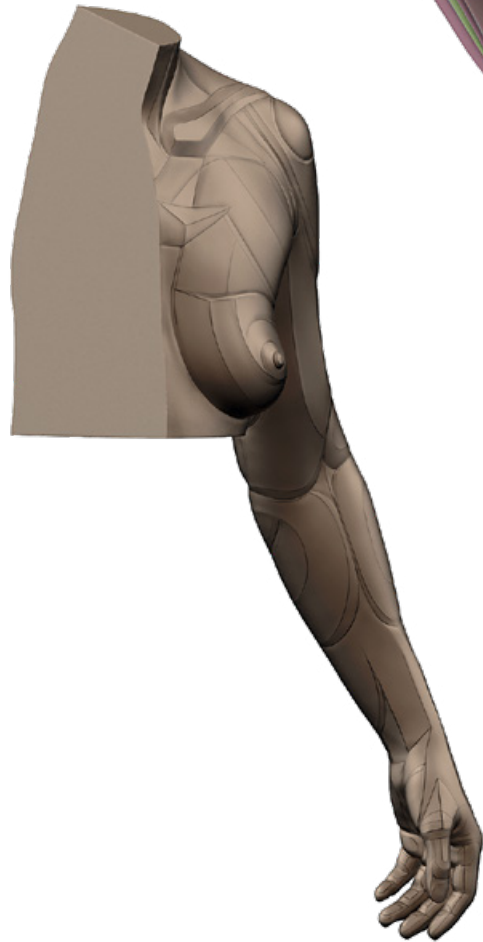
Muscles



1st level
block-out

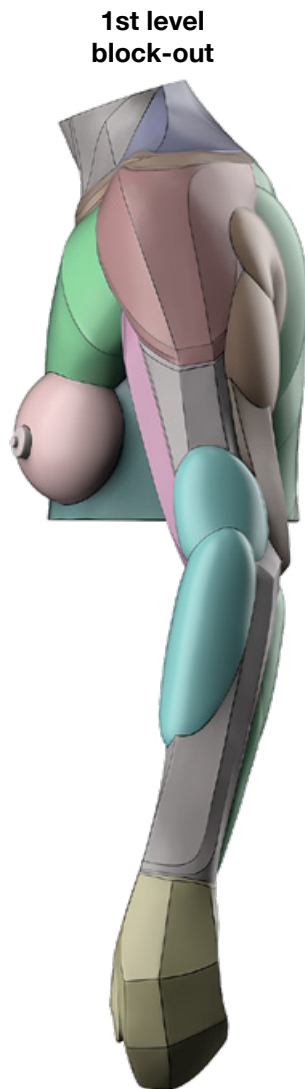
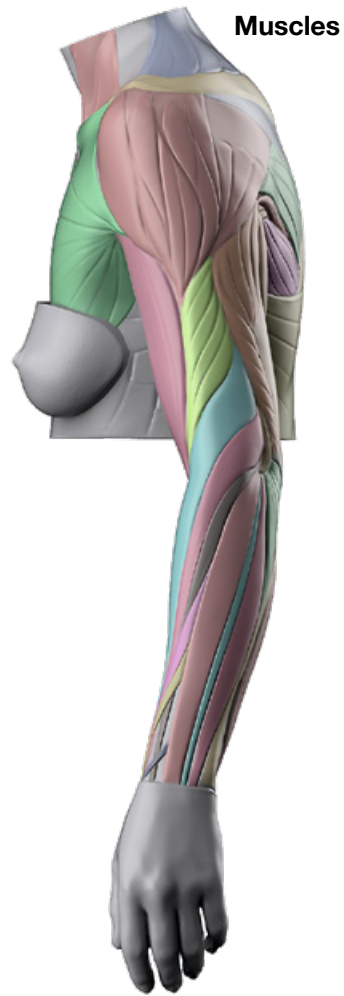


2nd level
block-out



F2 – Straight neutral arm

Lateral view



F2 – Straight neutral arm

Back

Skin



Muscles



1st level
block-out



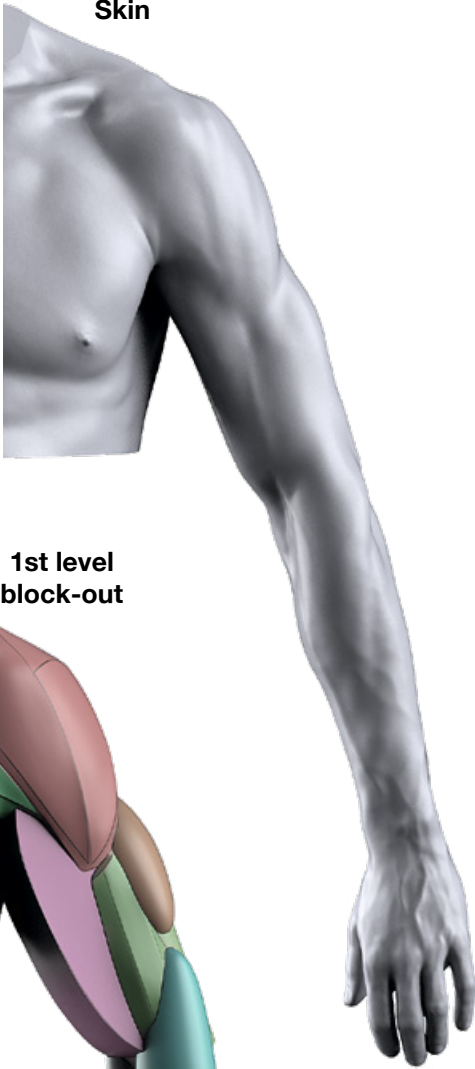
2nd level
block-out



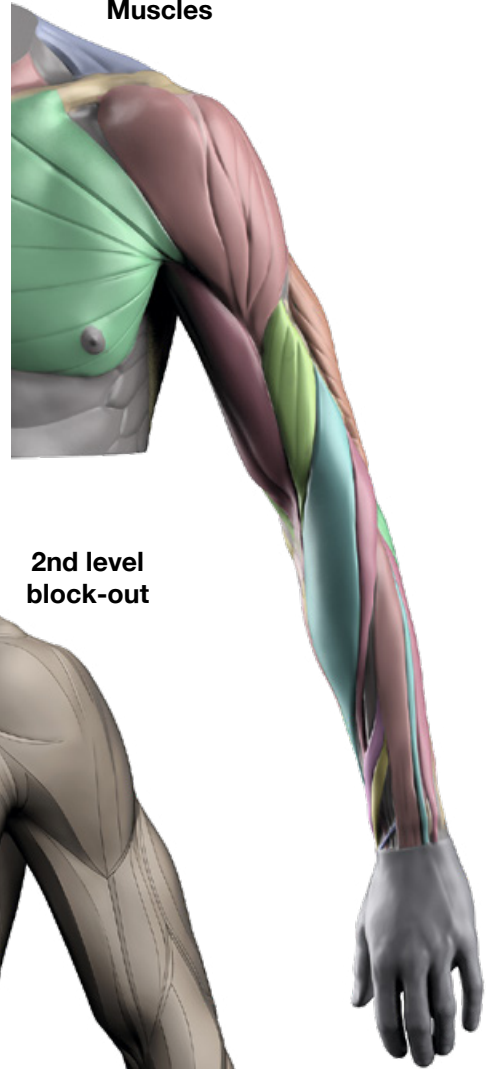
M3 – Straight pronated arm

Front

Skin



Muscles



1st level
block-out

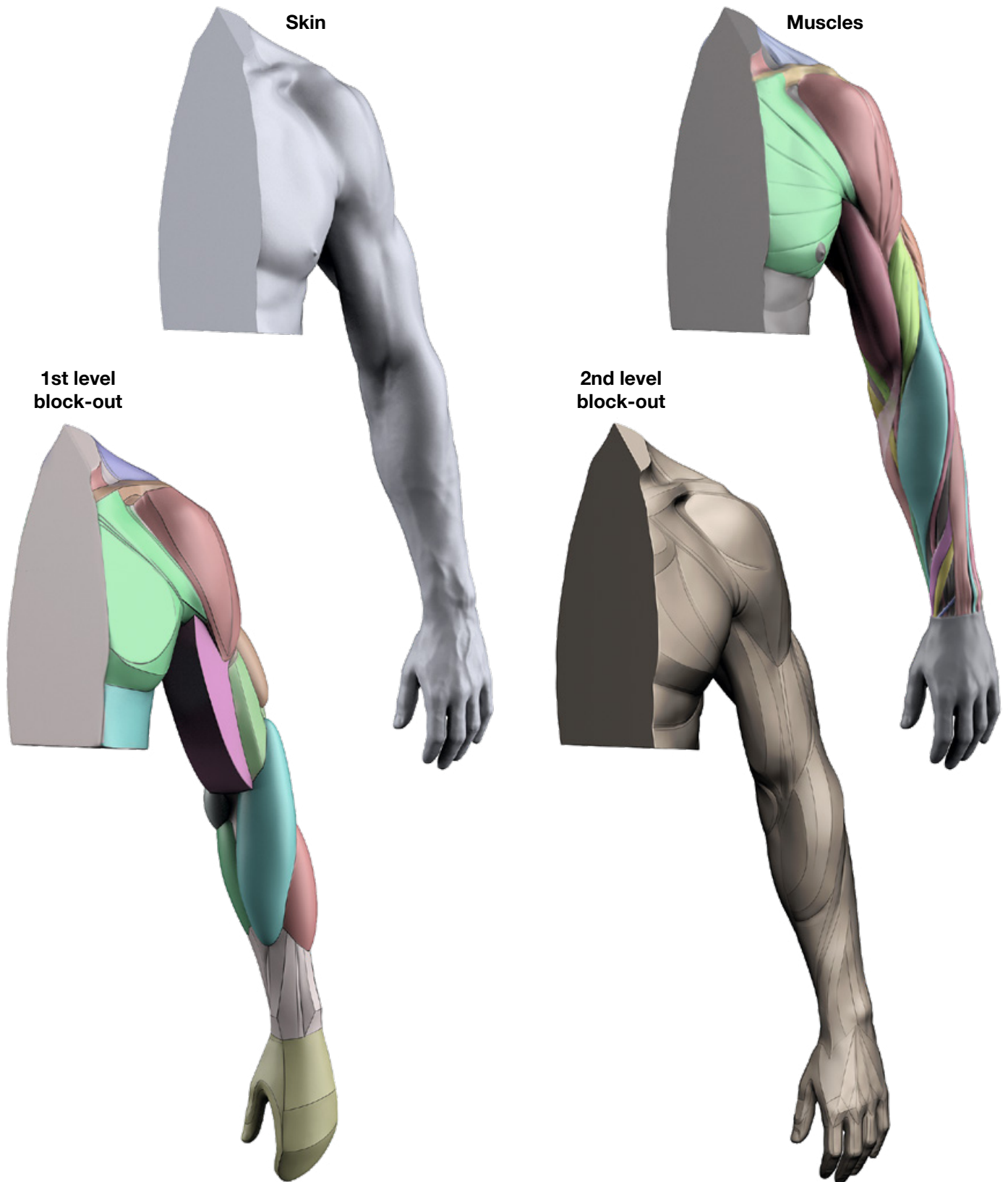


2nd level
block-out



M3 – Straight pronated arm

Medial view



M3 – Straight pronated arm

Lateral view

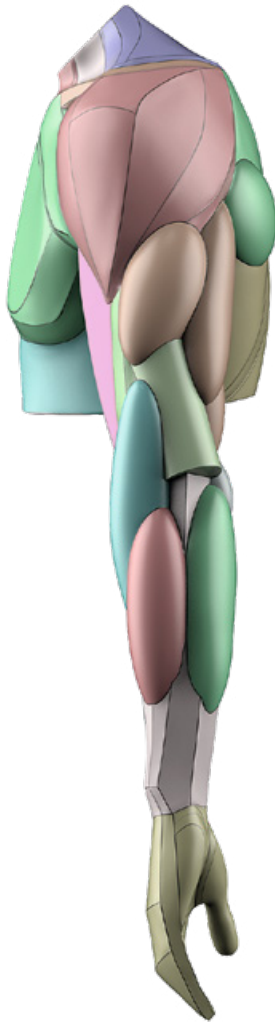
Skin



Muscles



**1st level
block-out**

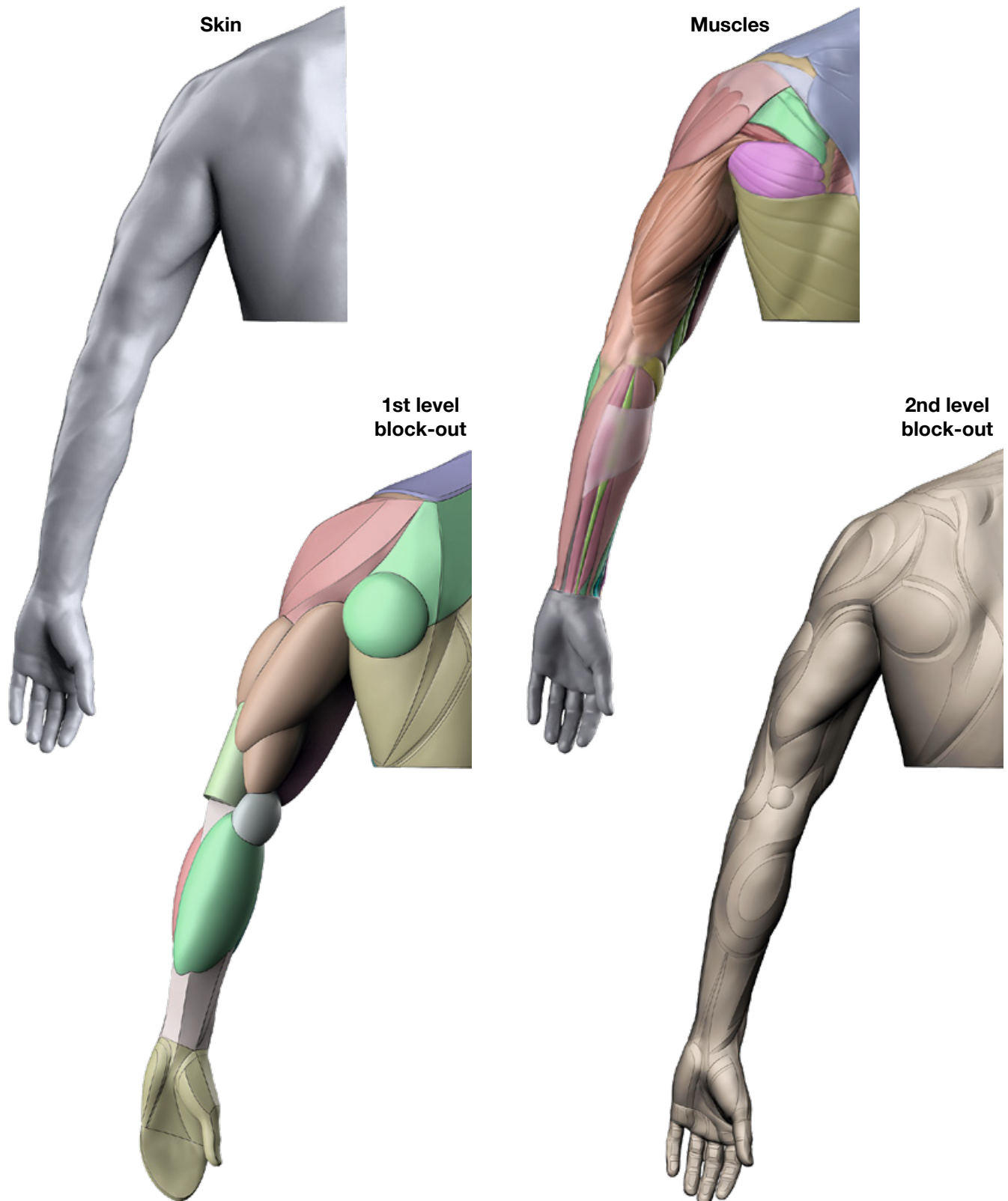


**2nd level
block-out**



M3 – Straight pronated arm

Back



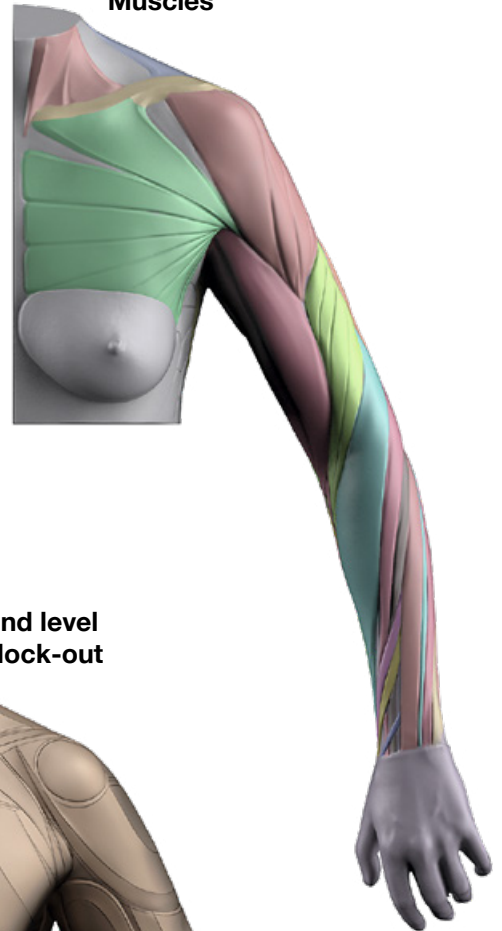
F3 – Straight pronated arm

Front

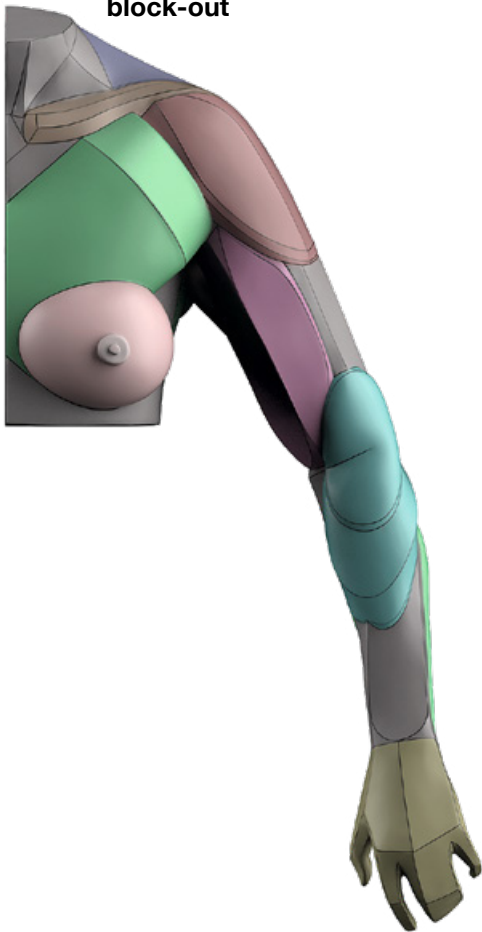
Skin



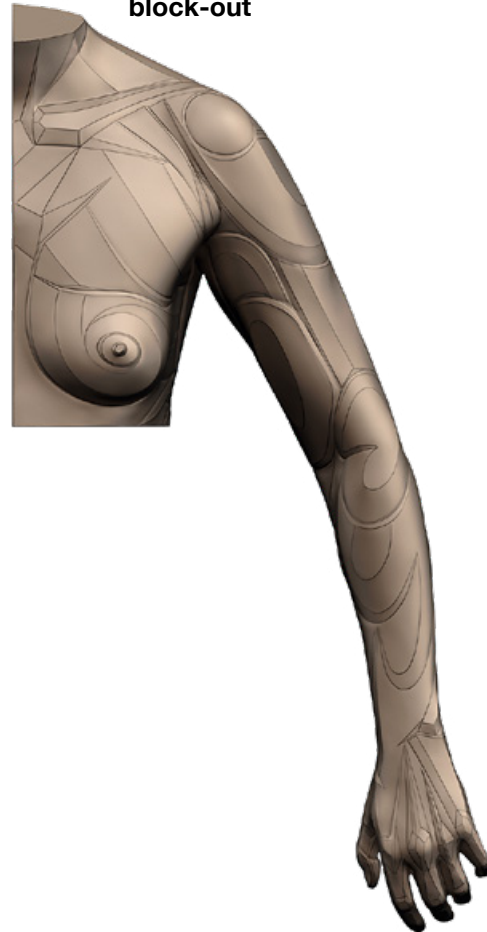
Muscles



1st level
block-out

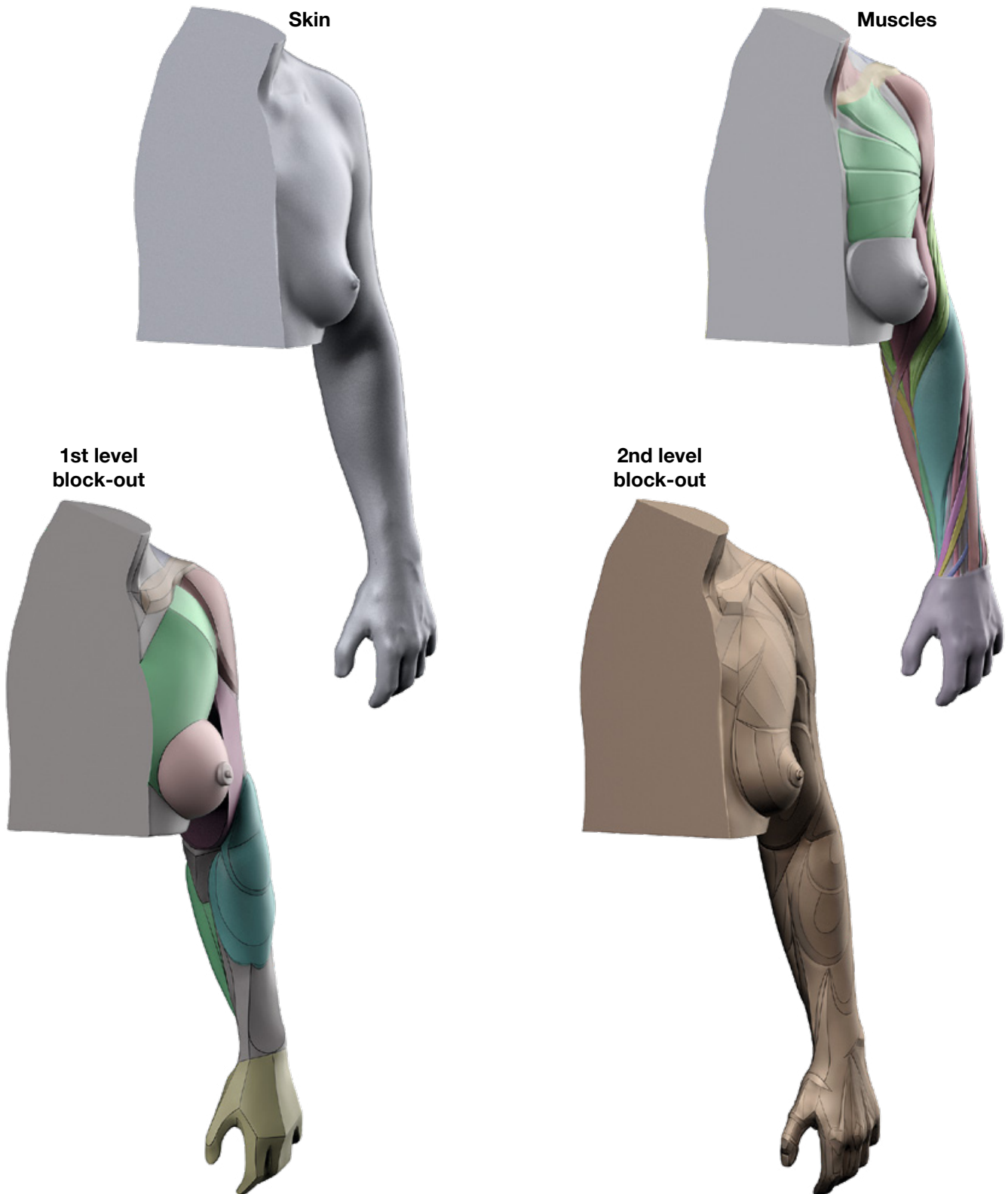


2nd level
block-out



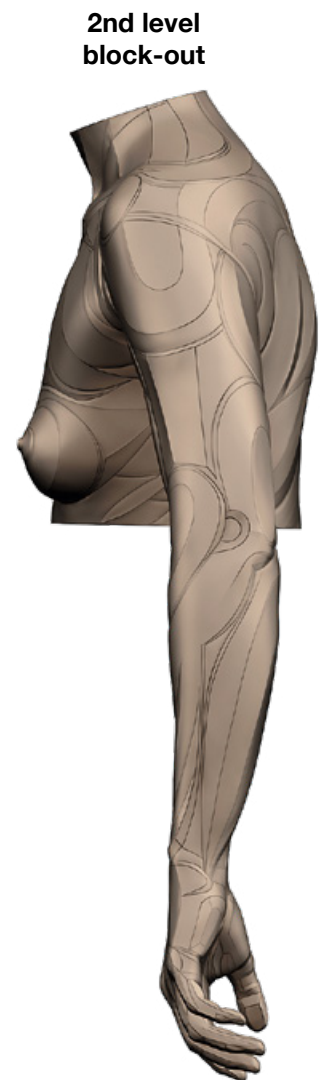
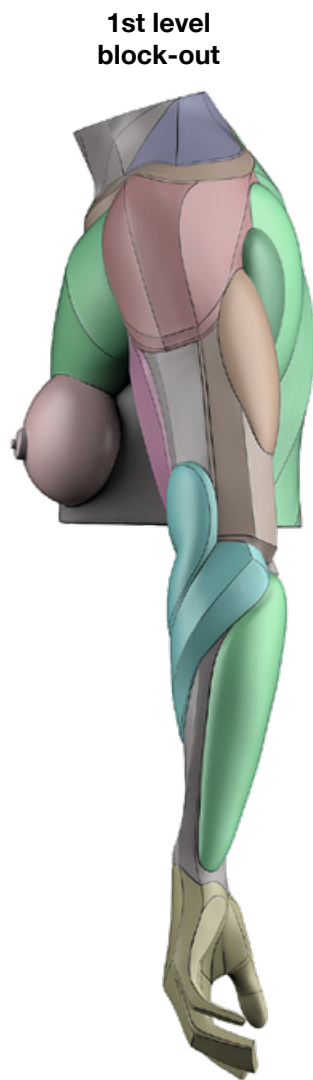
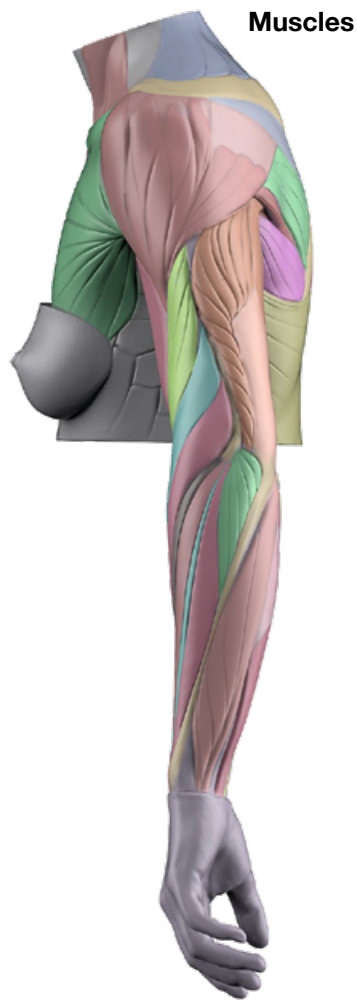
F3 – Straight pronated arm

Medial view



F3 – Straight pronated arm

Lateral view



F3 – Straight pronated arm

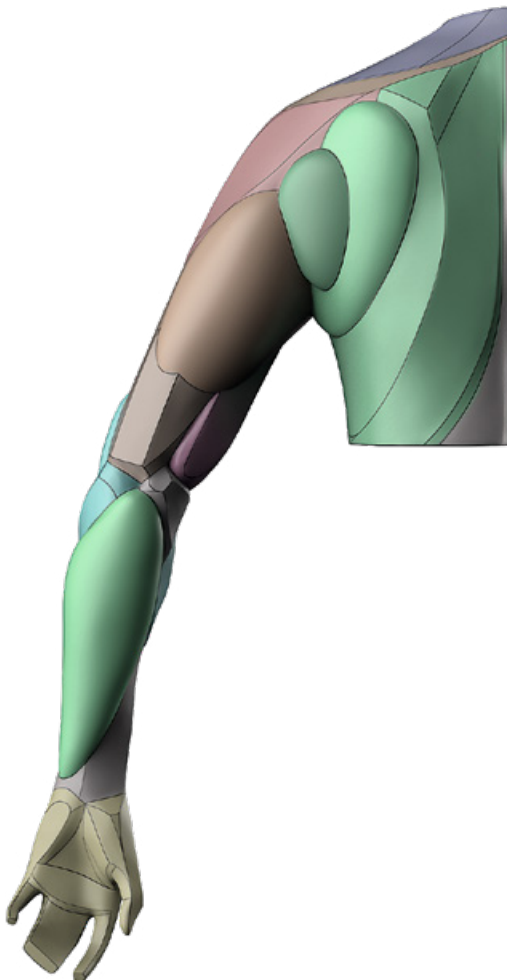
Back

Skin

Muscles

1st level
block-out

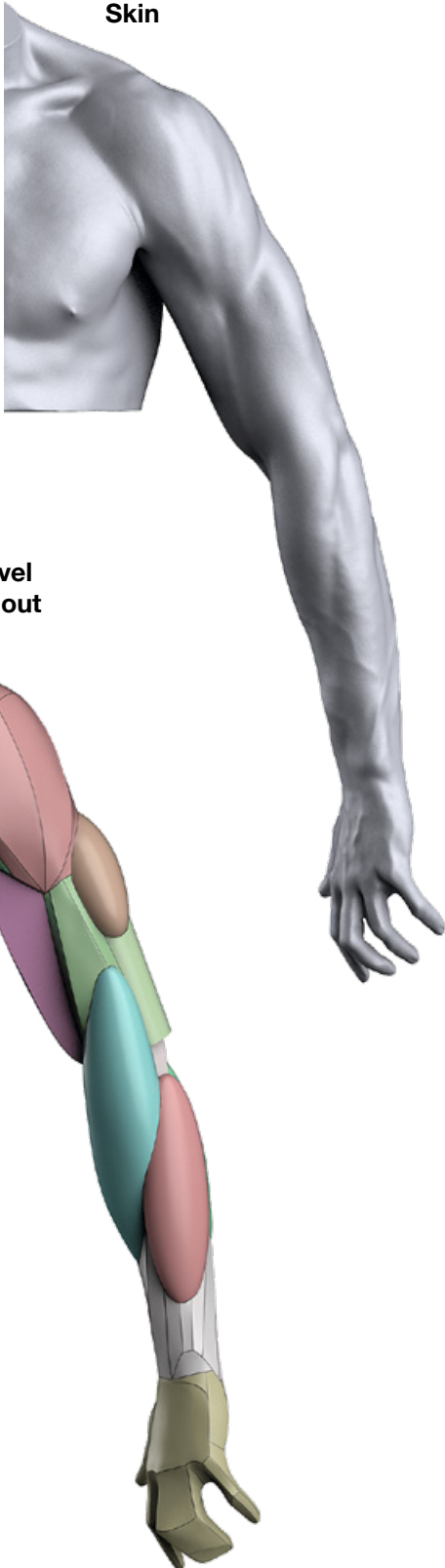
2nd level
block-out



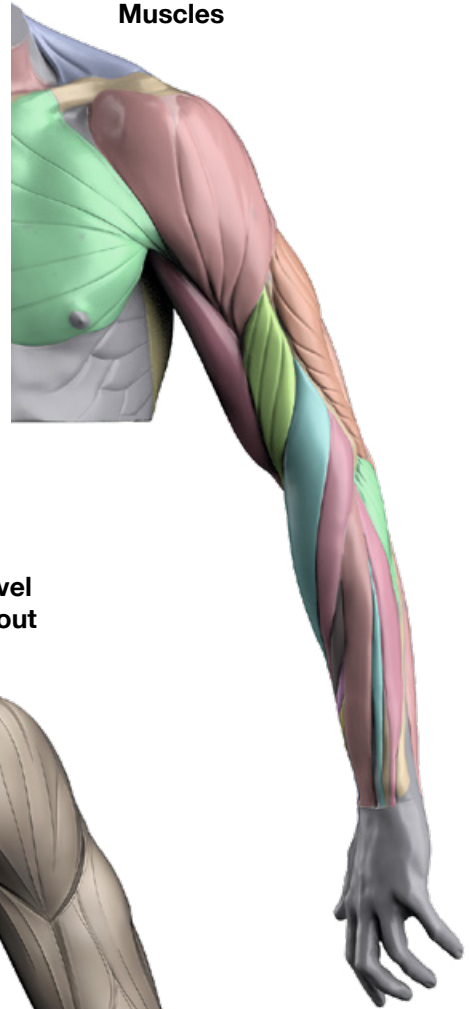
M4 – Straight force-pronated arm

Front

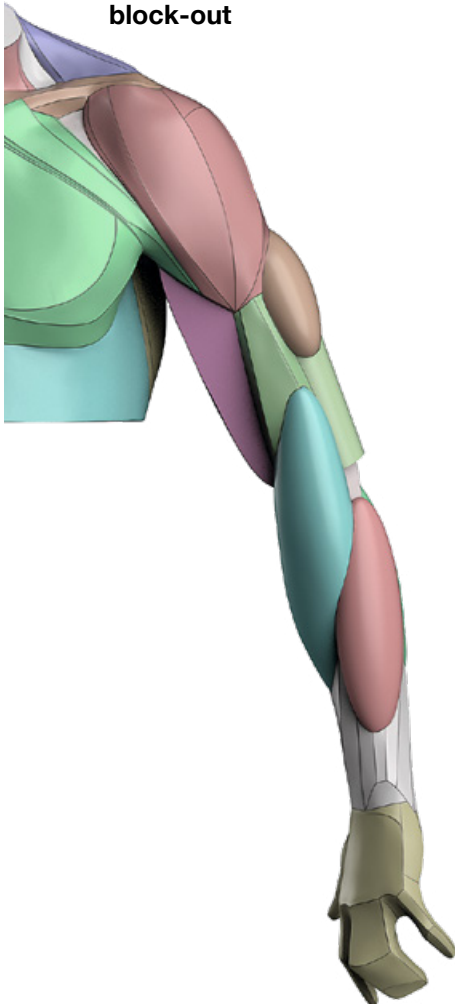
Skin



Muscles



1st level
block-out

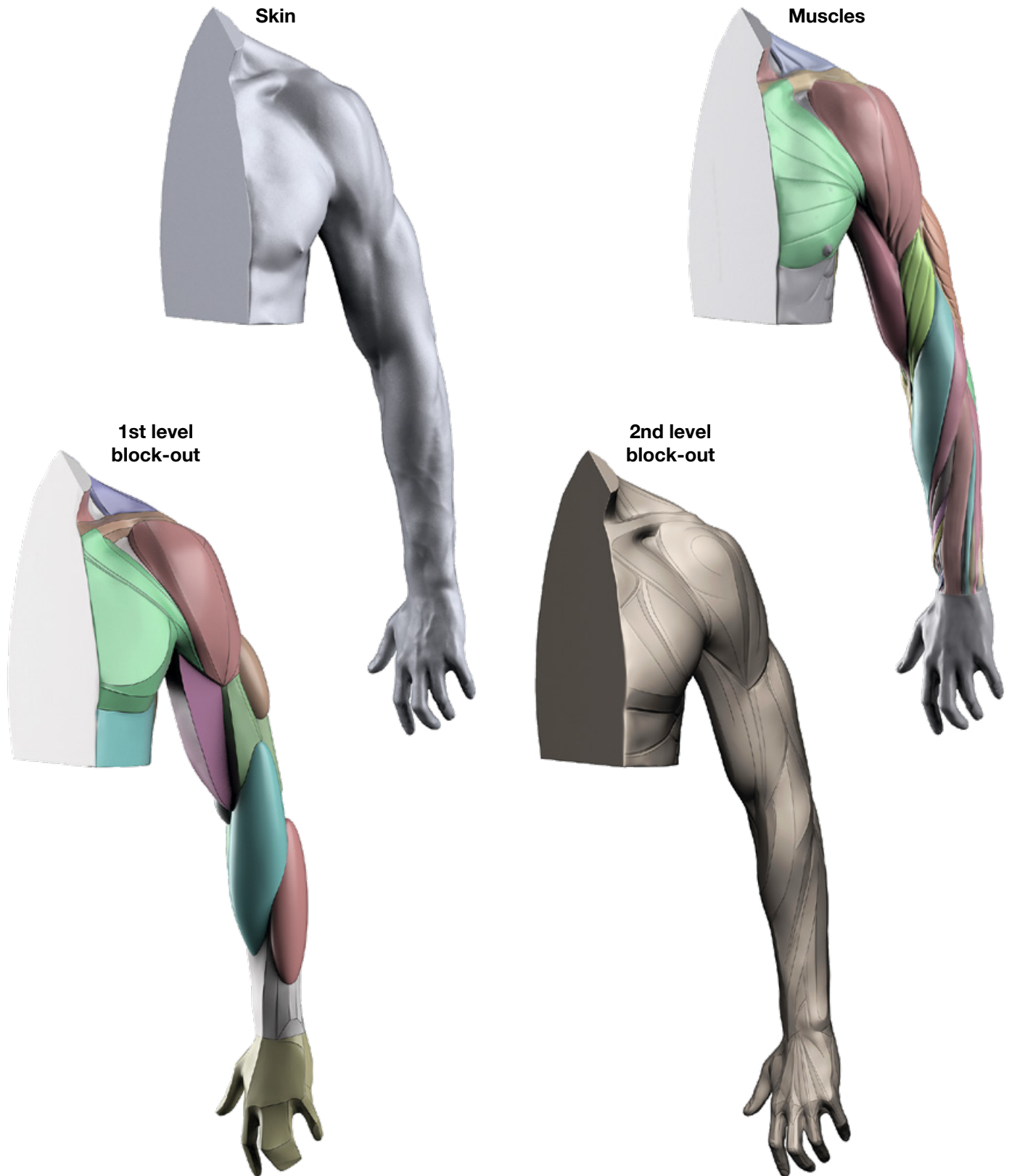


2nd level
block-out



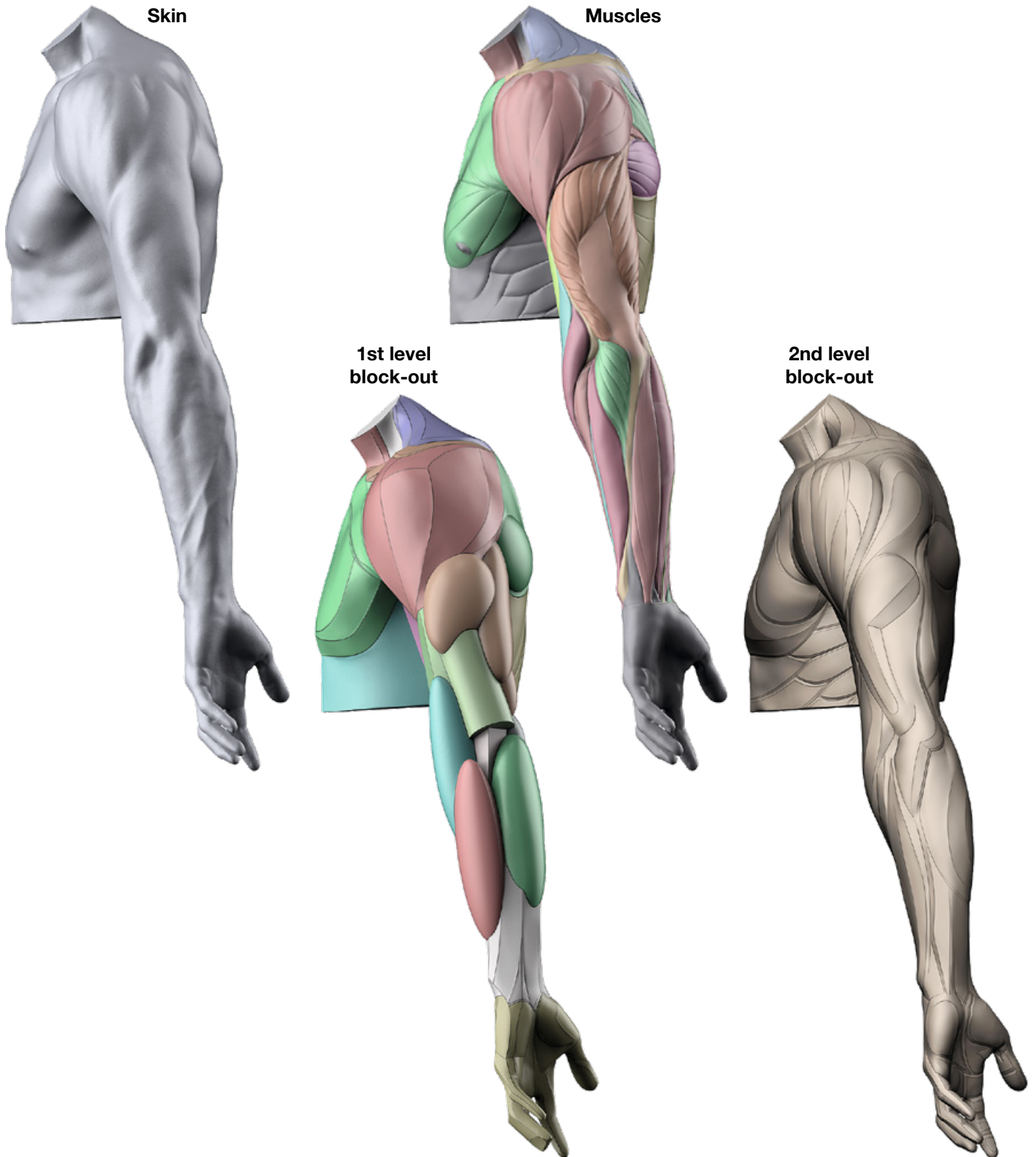
M4 – Straight force-pronated arm

Medial view



M4 – Straight force-pronated arm

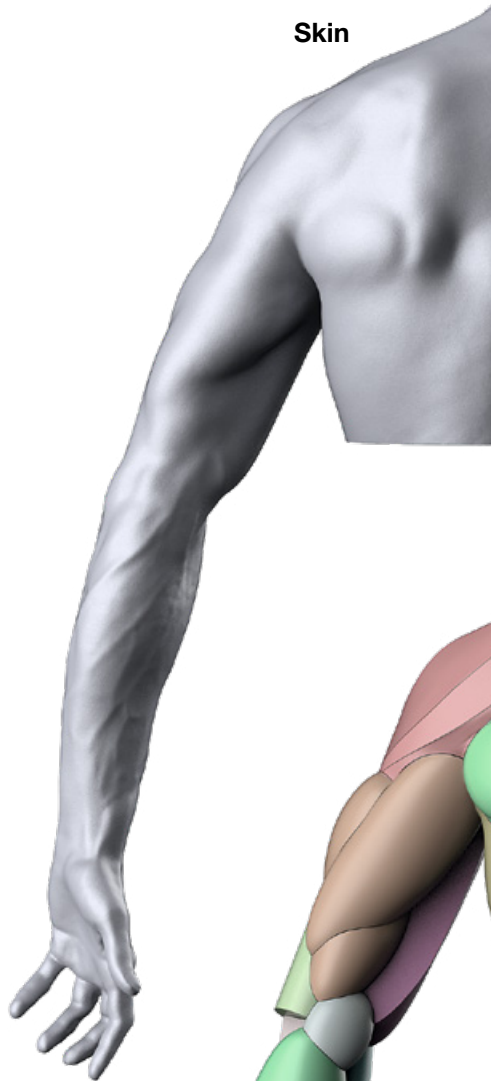
Lateral view



M4 – Straight force-pronated arm

Back

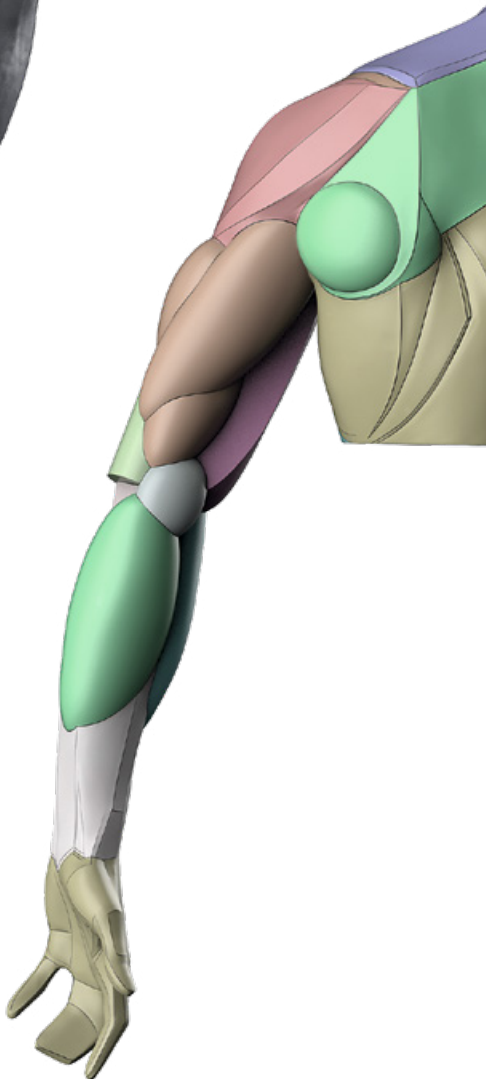
Skin



Muscles



1st level
block-out



2nd level
block-out



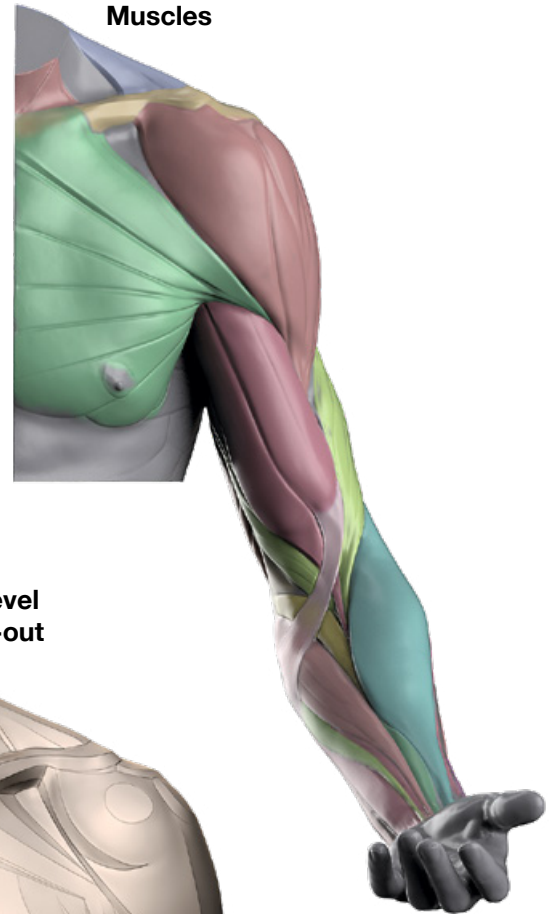
M5 – Slightly bent supinated arm

Front

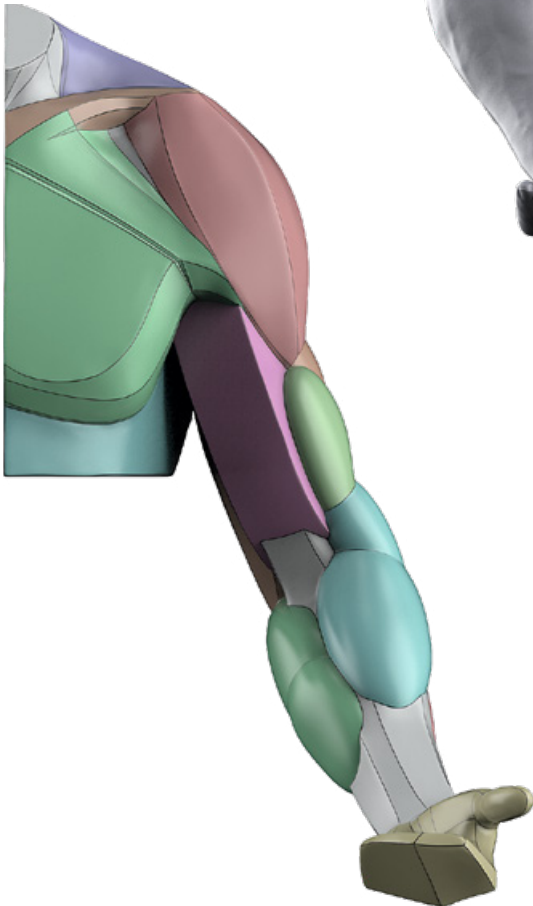
Skin



Muscles



1st level
block-out

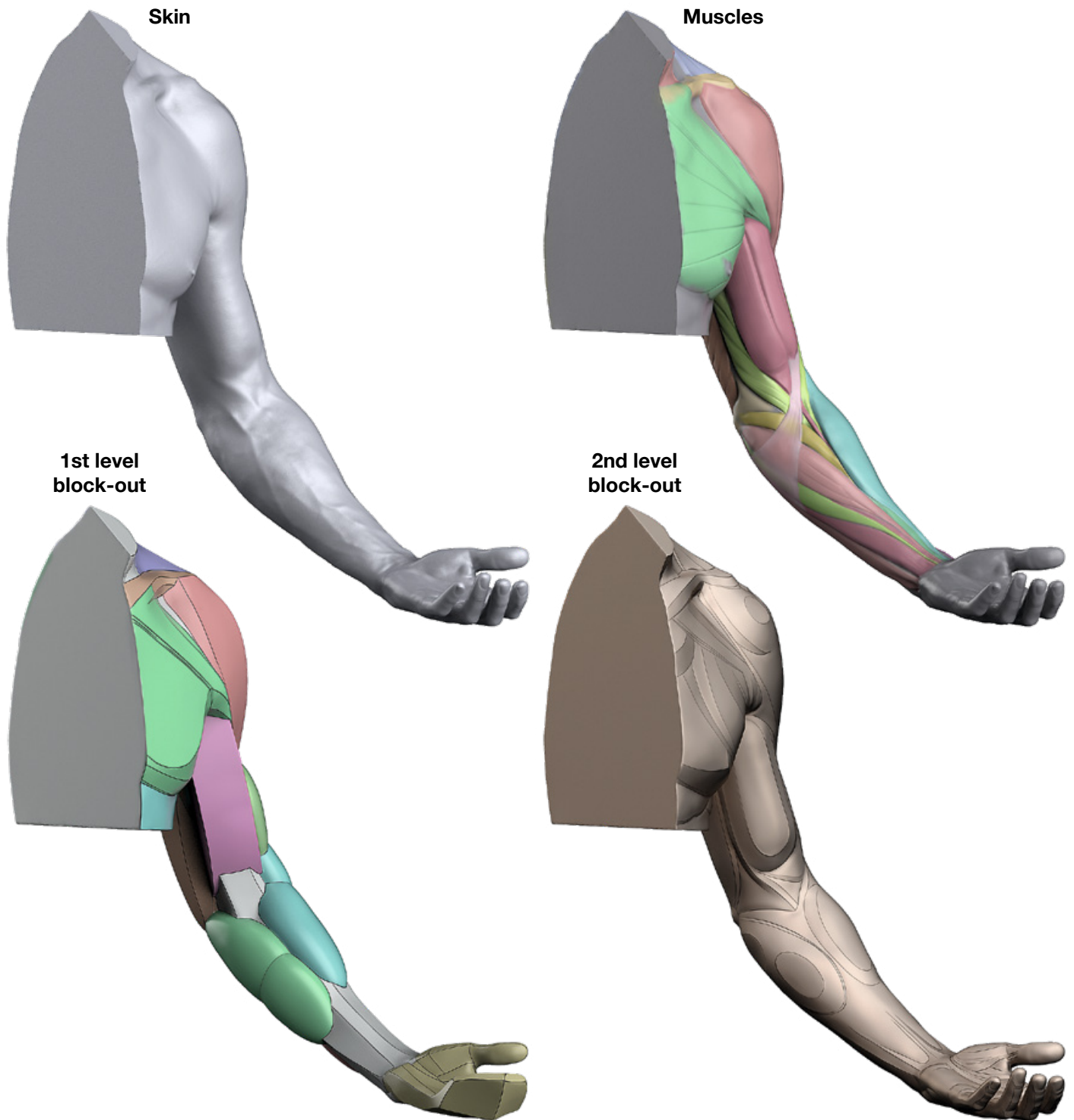


2nd level
block-out



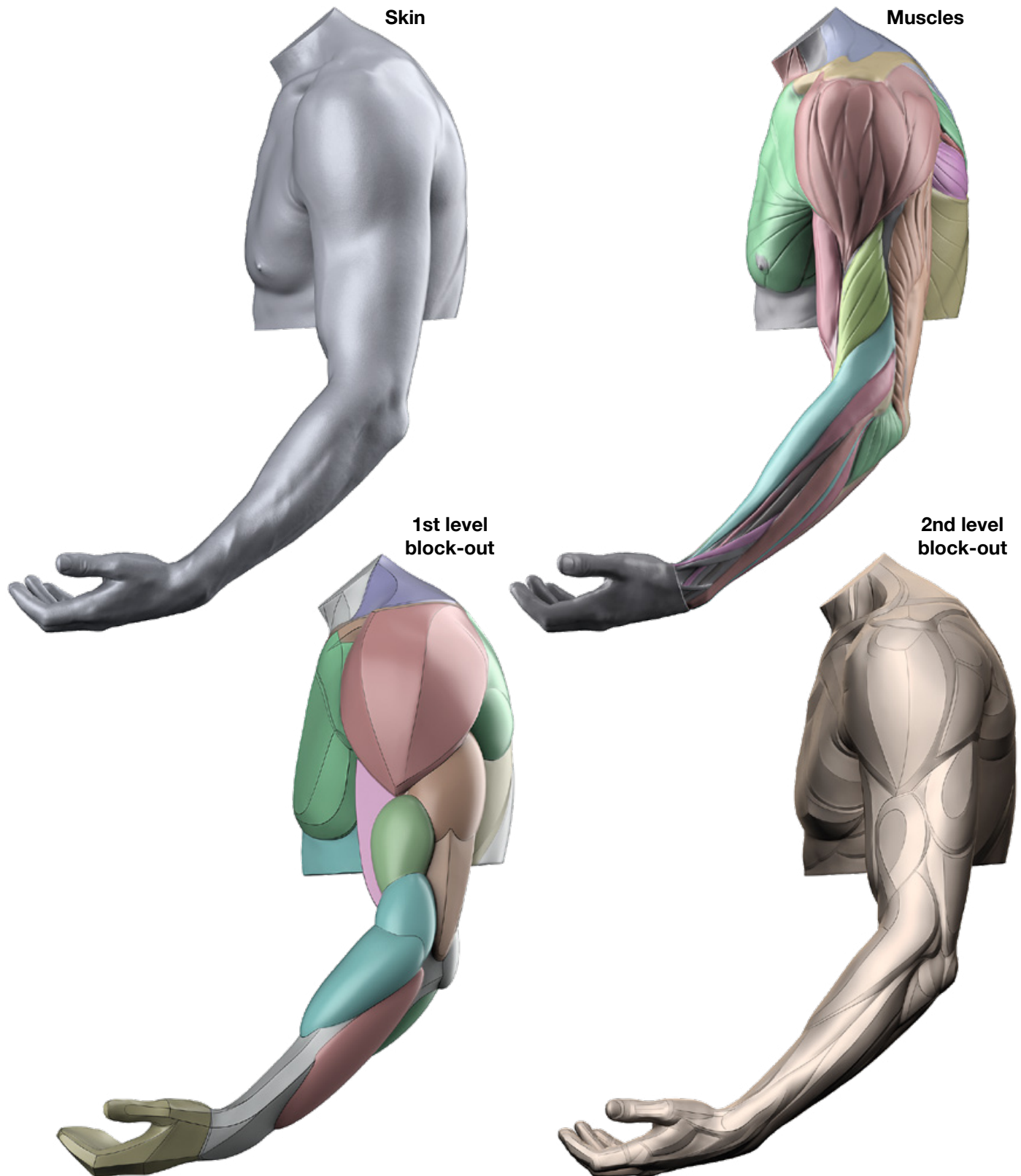
M5 – Slightly bent supinated arm

Medial view



M5 – Slightly bent supinated arm

Lateral view



M5 – Slightly bent supinated arm

Back

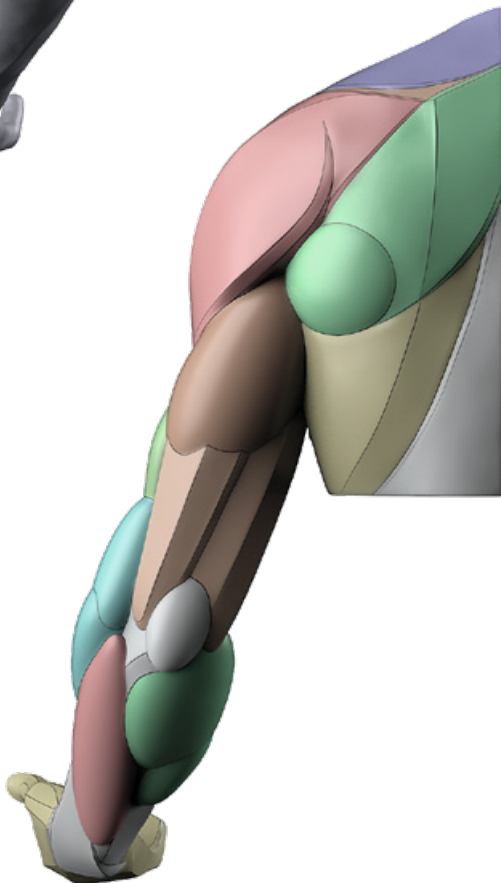
Skin



Muscles



1st level
block-out



2nd level
block-out



M6 – Slightly bent neutral arm

Front

Skin



Muscles



1st level
block-out

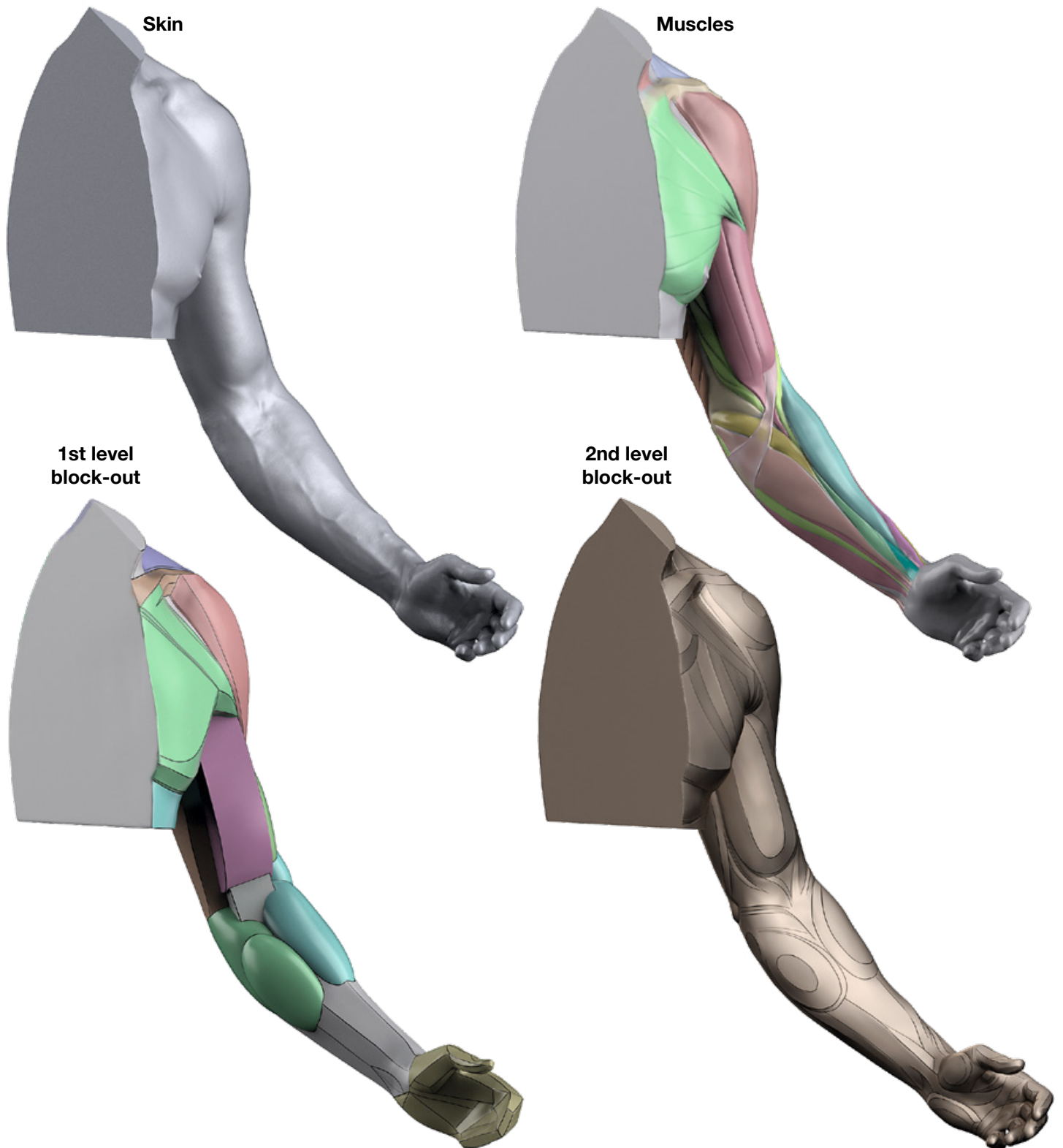


2nd level
block-out



M6 – Slightly bent neutral arm

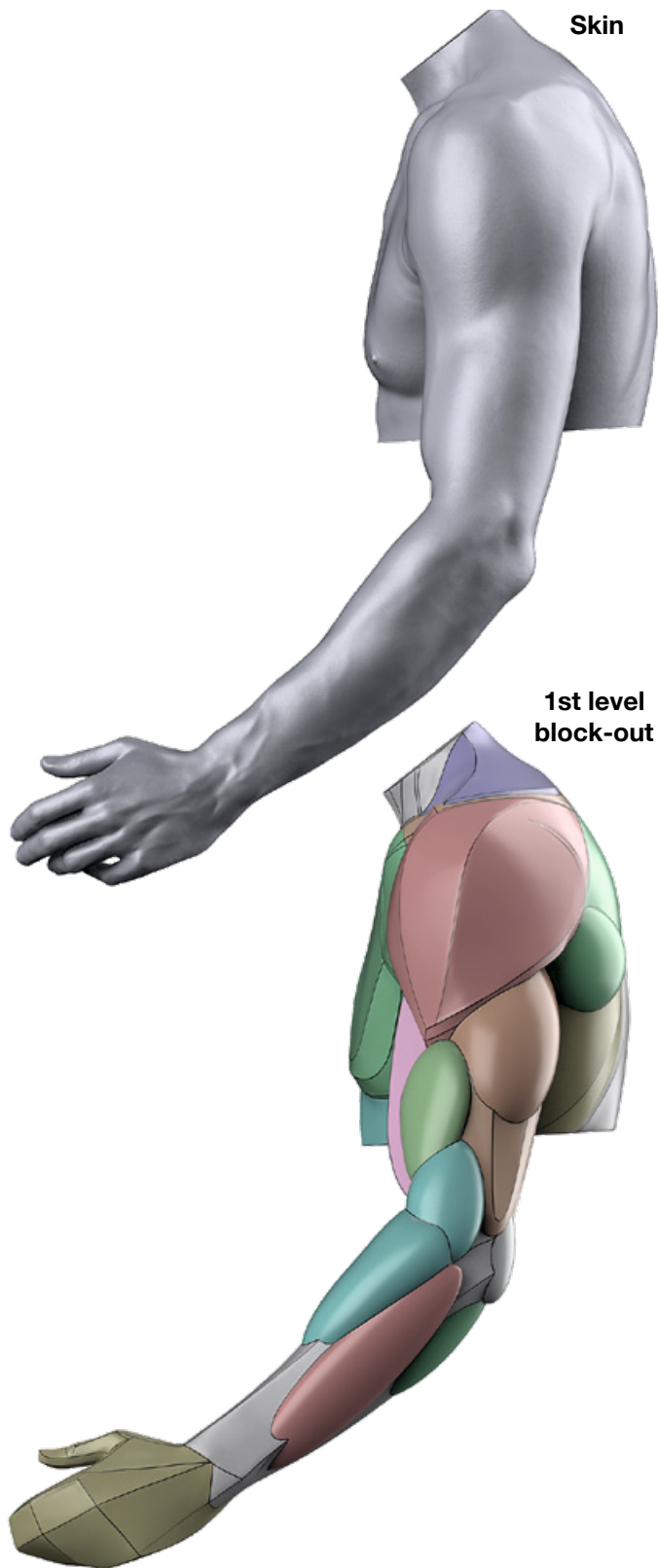
Medial view



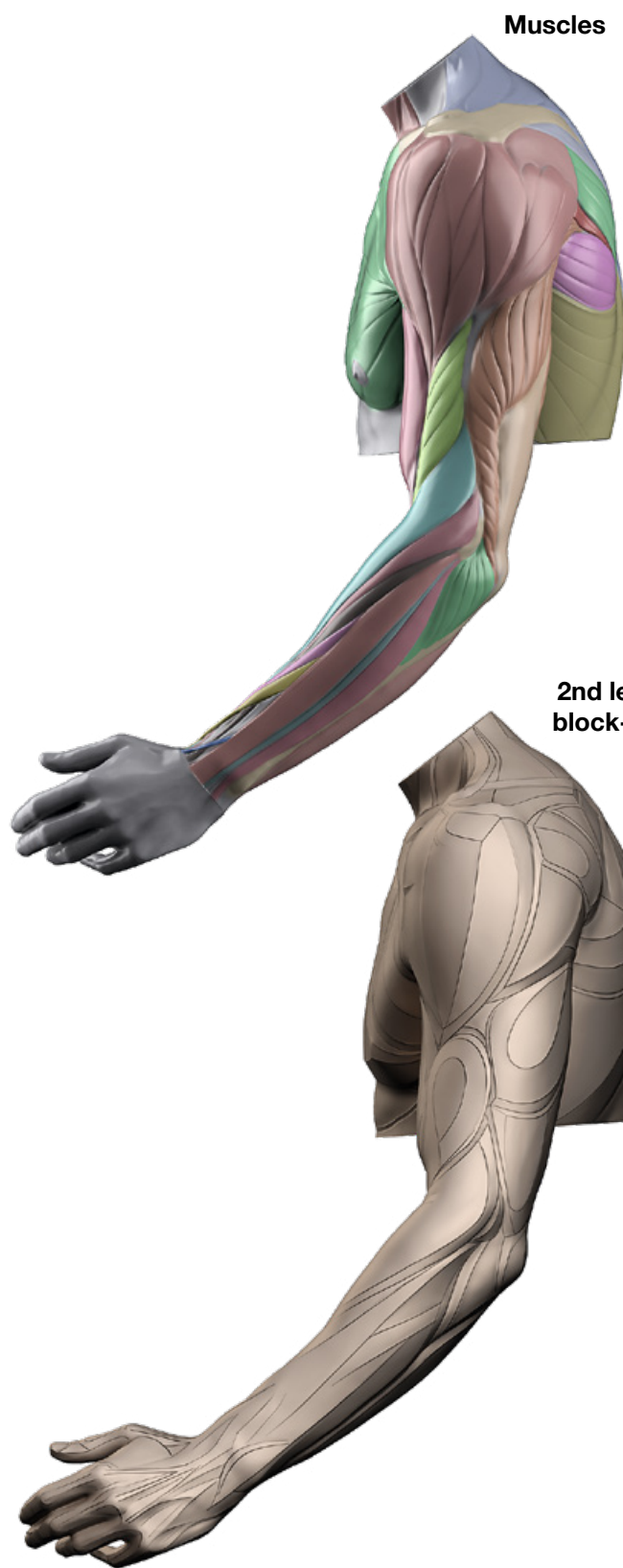
M6 – Slightly bent neutral arm

Lateral view

Skin



Muscles



1st level
block-out



2nd level
block-out



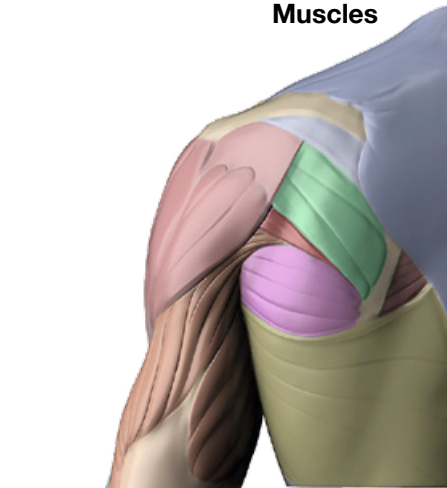
M6 – Slightly bent neutral arm

Back

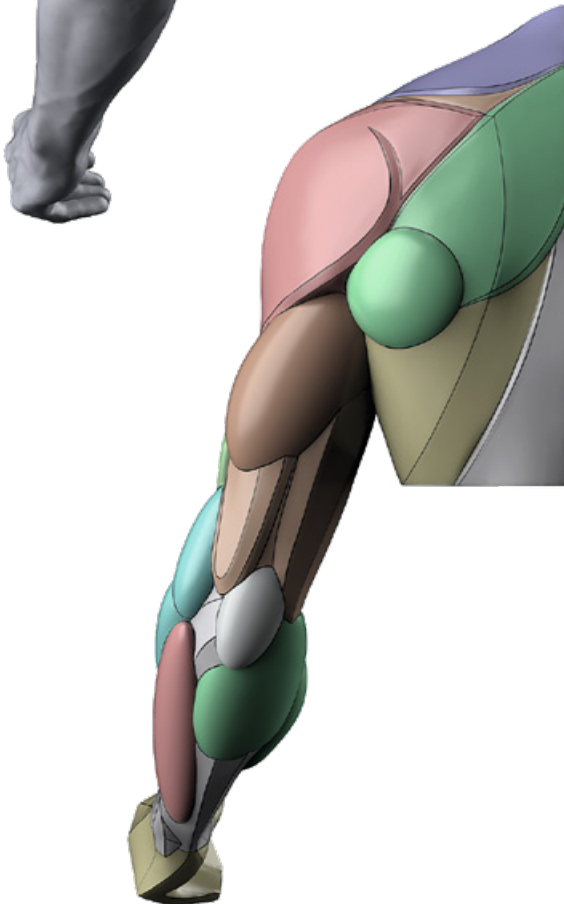
Skin



Muscles



1st level
block-out



2nd level
block-out



M7 – Slightly bent pronated arm

Front

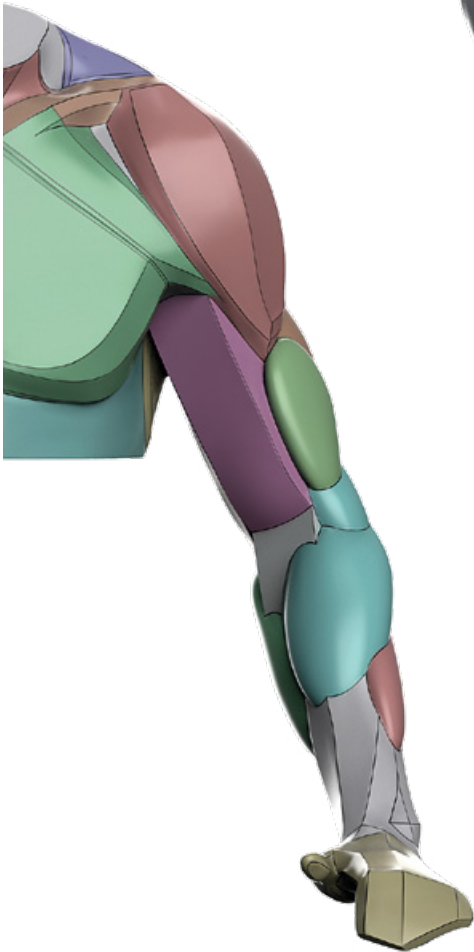
Skin



Muscles



1st level
block-out

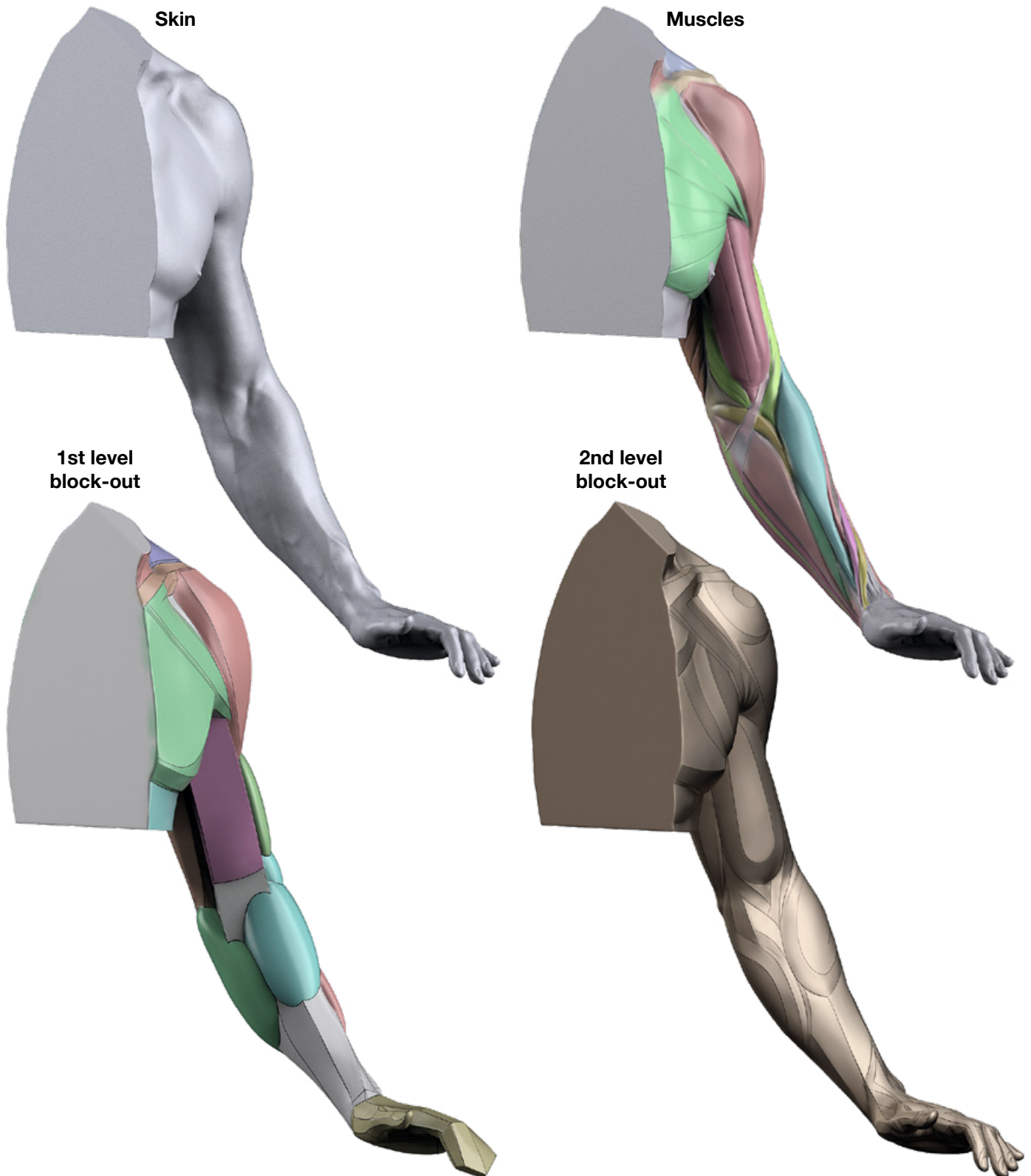


2nd level
block-out



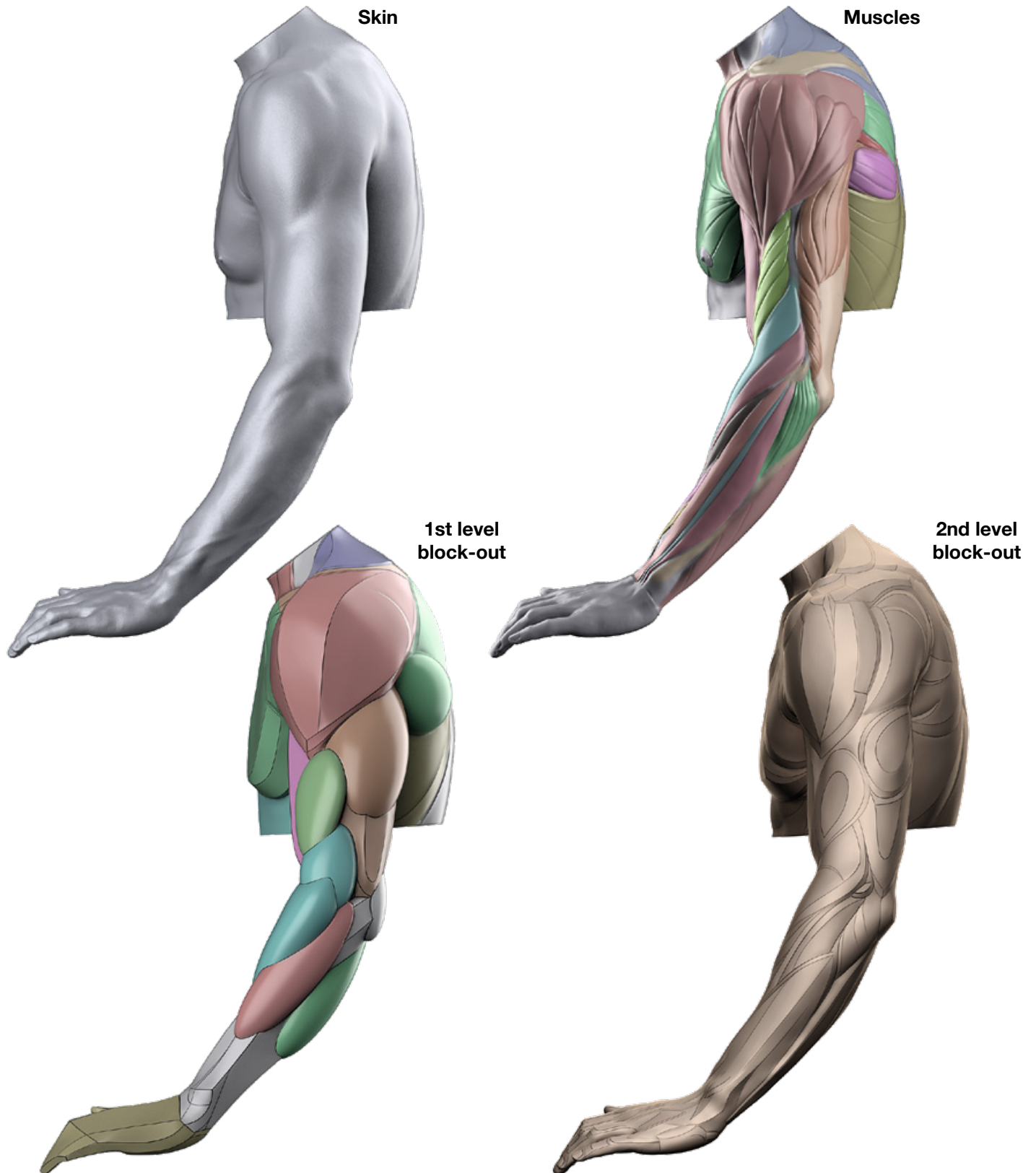
M7 – Slightly bent pronated arm

Medial view



M7 – Slightly bent pronated arm

Lateral view



M7 – Slightly bent pronated arm

Back

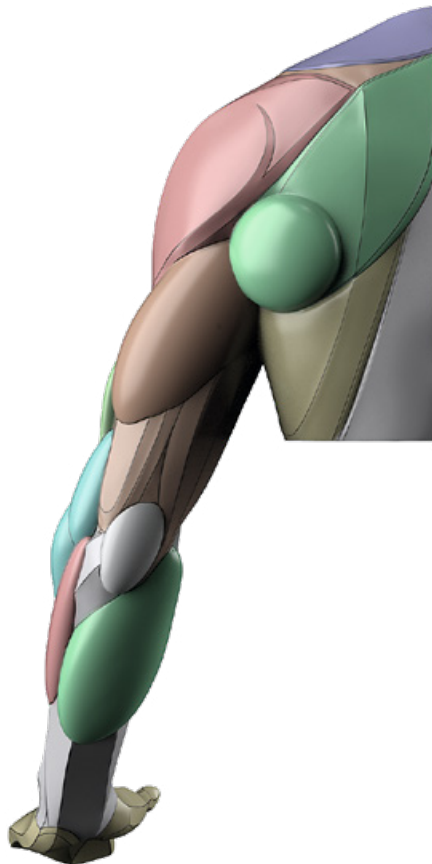
Skin



Muscles



1st level
block-out



2nd level
block-out



M8 – Bent supinated arm

Front

Skin



Muscles



1st level block-out

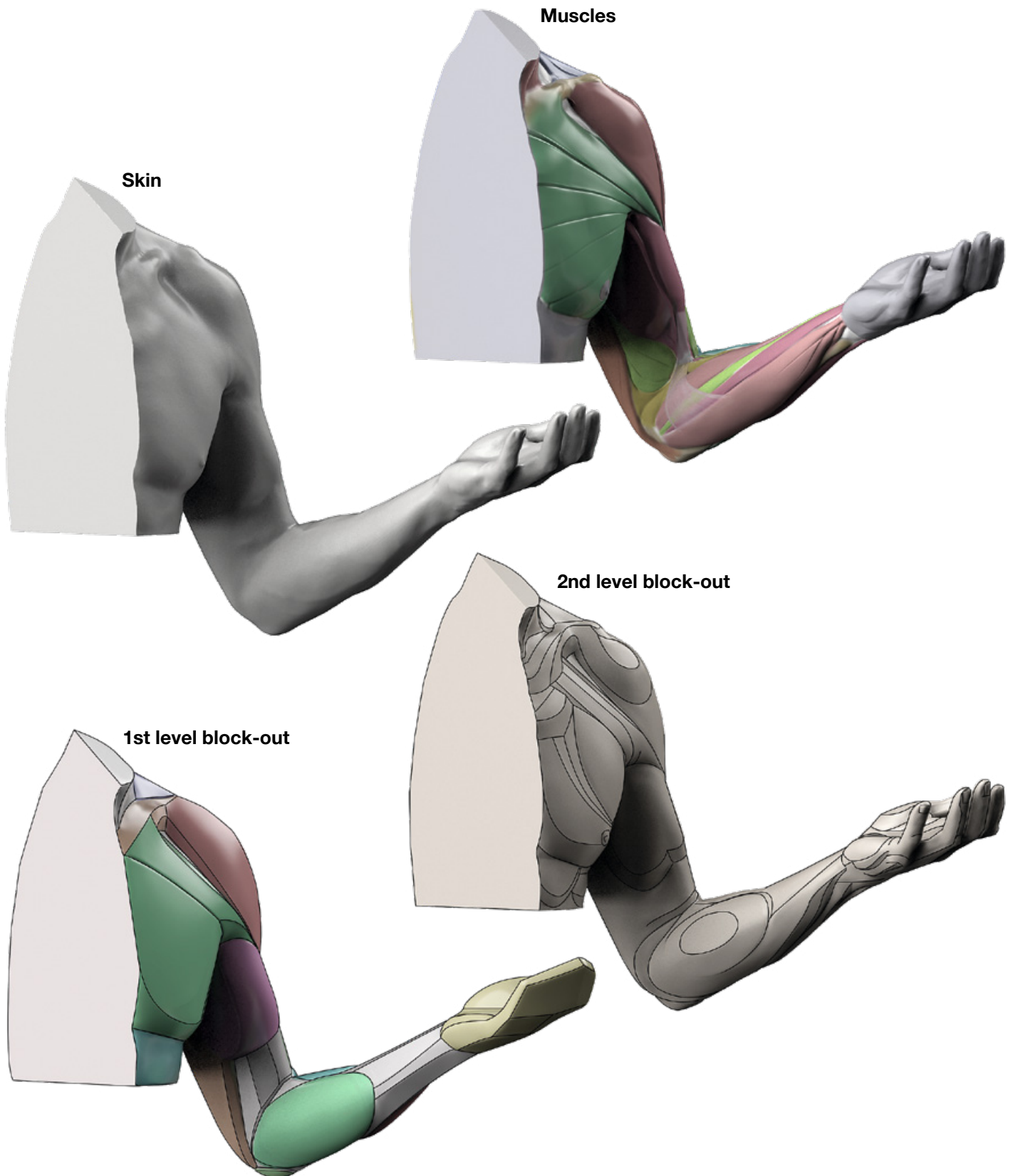


2nd level block-out



M8 – Bent supinated arm

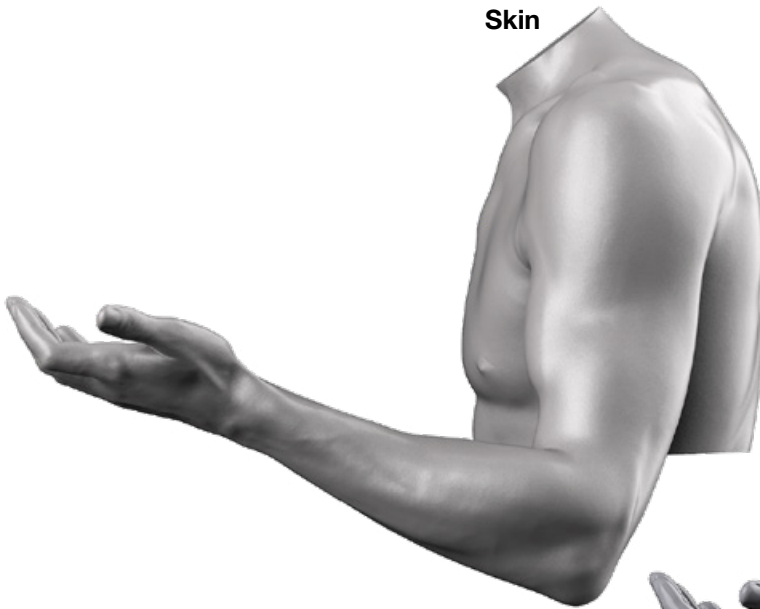
Medial view



M8 – Bent supinated arm

Lateral view

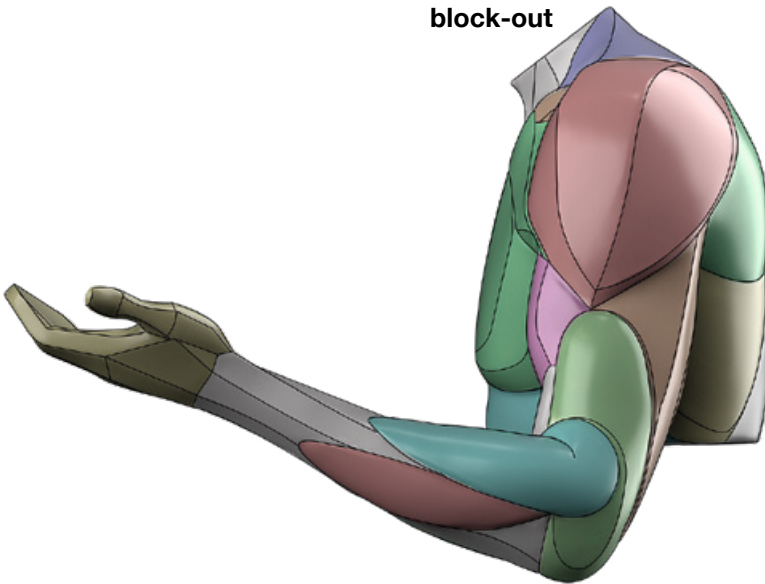
Skin



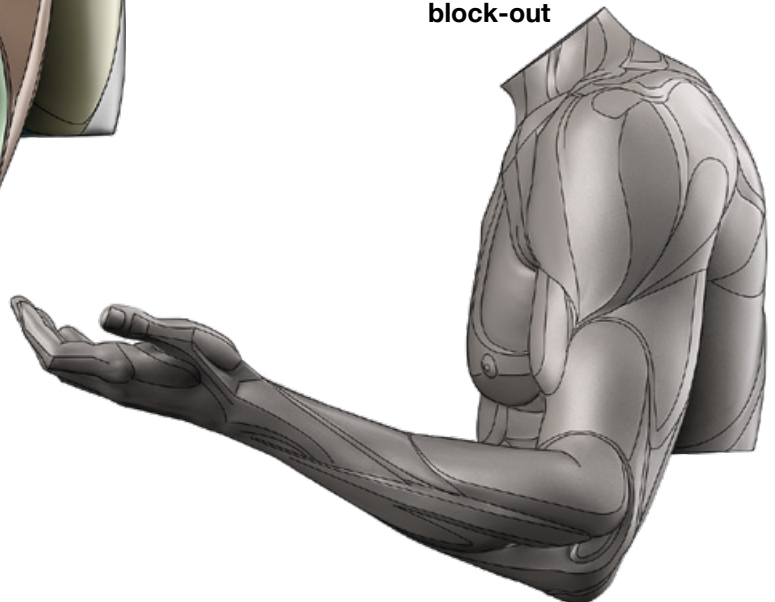
Muscles



1st level
block-out



2nd level
block-out



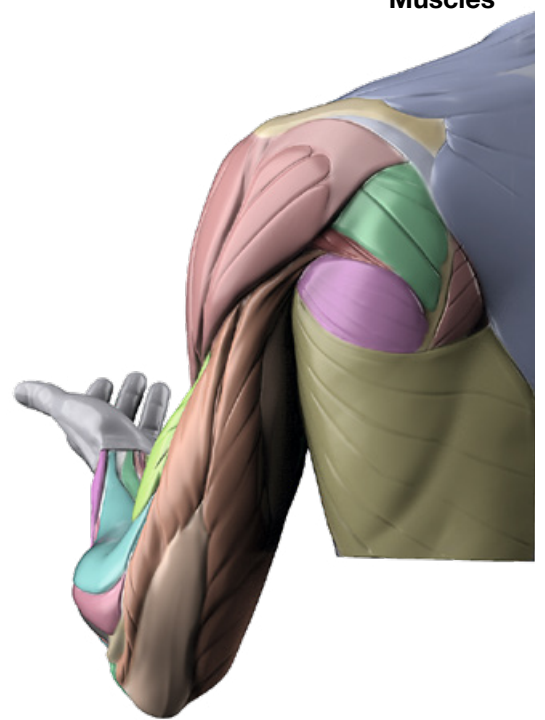
M8 – Bent supinated arm

Back

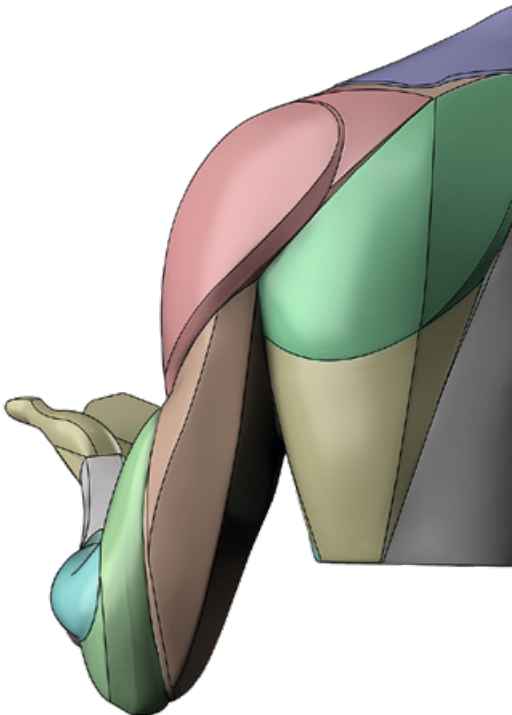
Skin



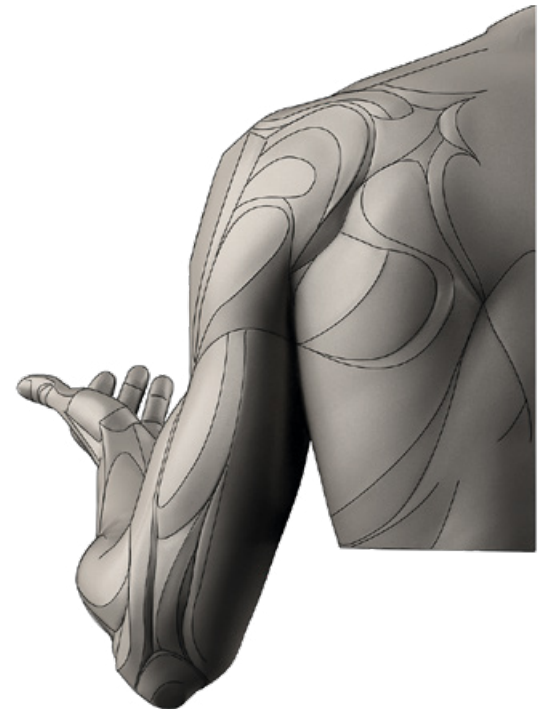
Muscles



1st level block-out

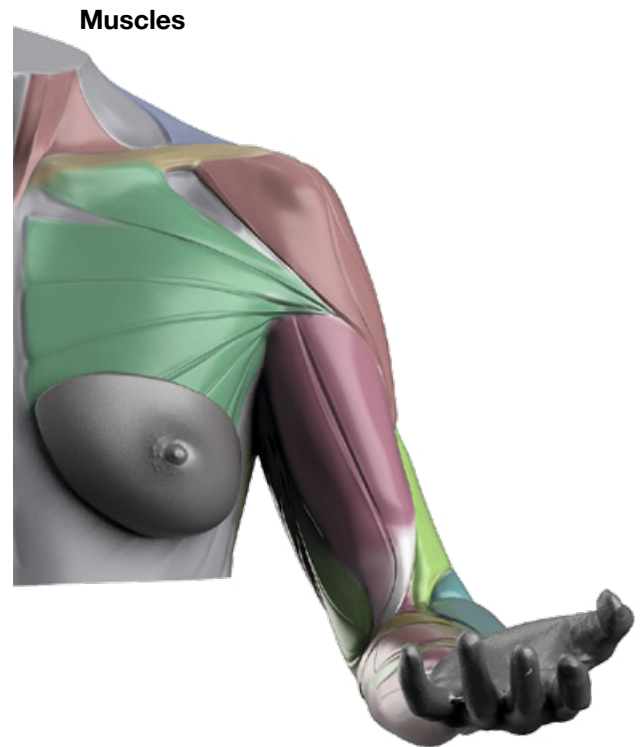


2nd level block-out



F8 – Bent supinated arm

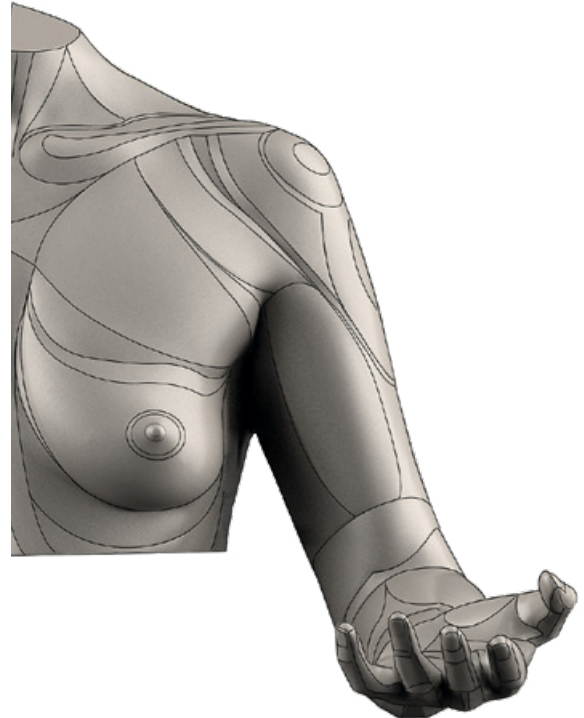
Front



1st level block-out



2nd level block-out



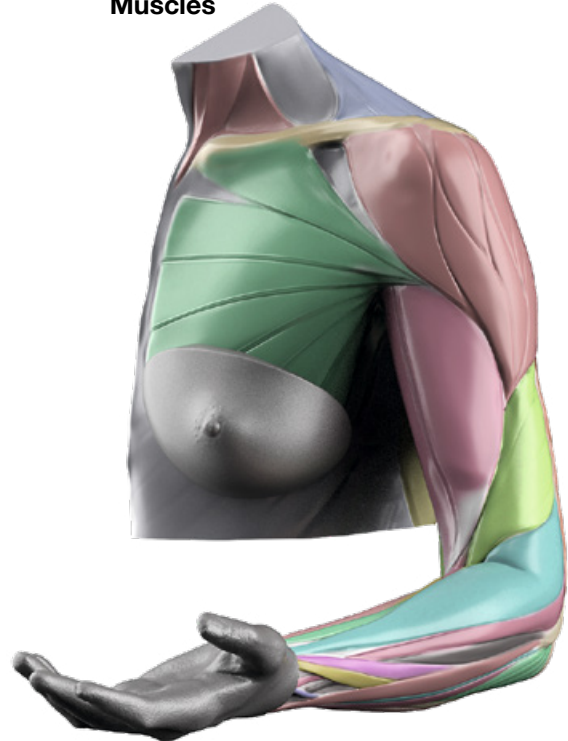
F8 – Bent supinated arm

Front-side view

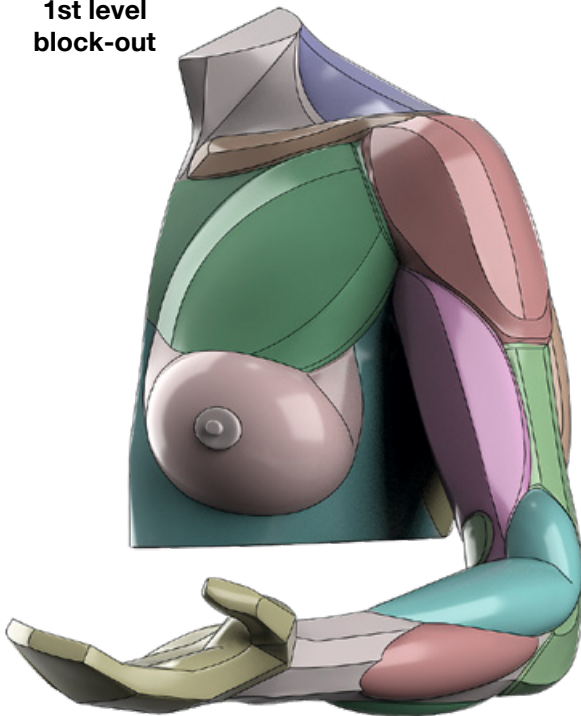
Skin



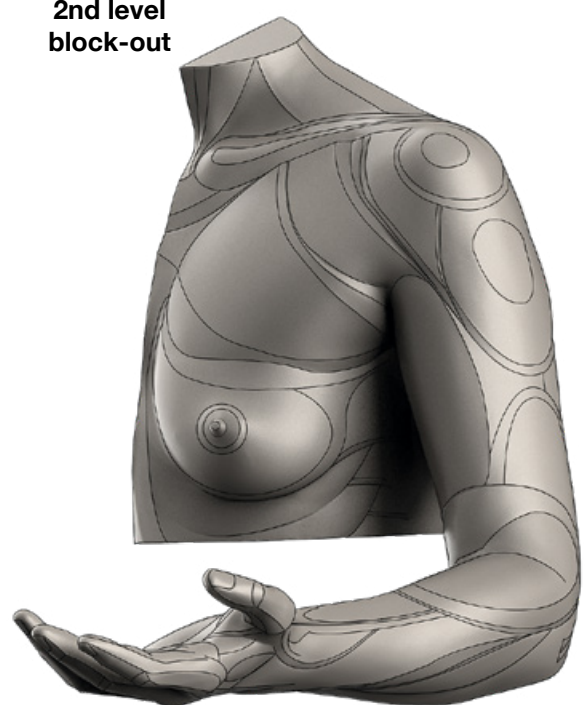
Muscles



**1st level
block-out**



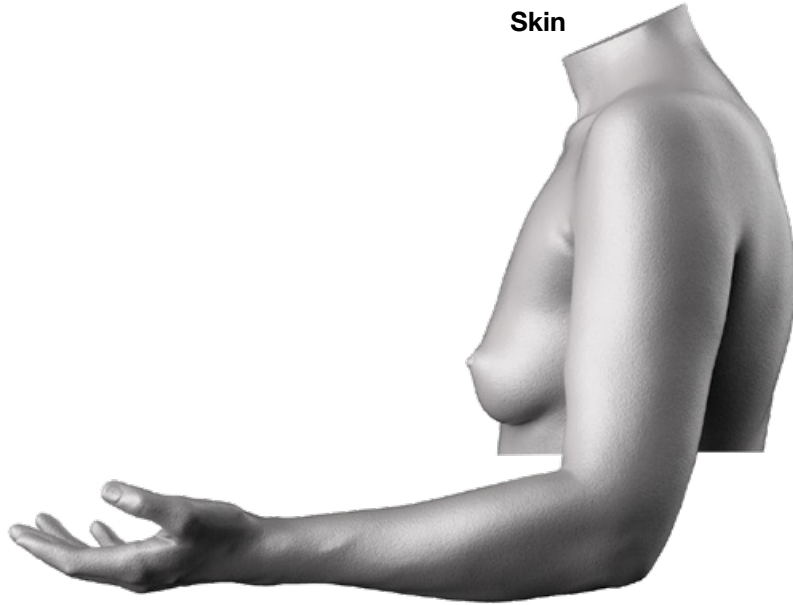
**2nd level
block-out**



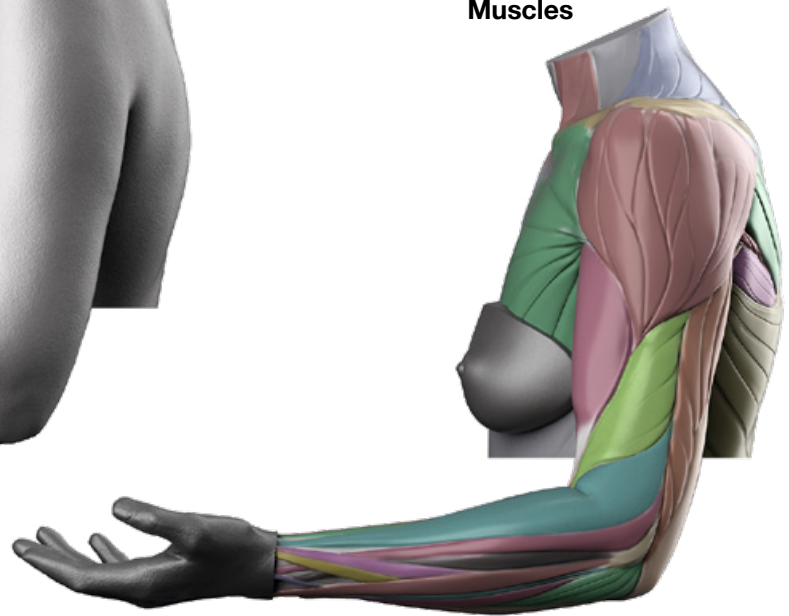
F8 – Bent supinated arm

Lateral view

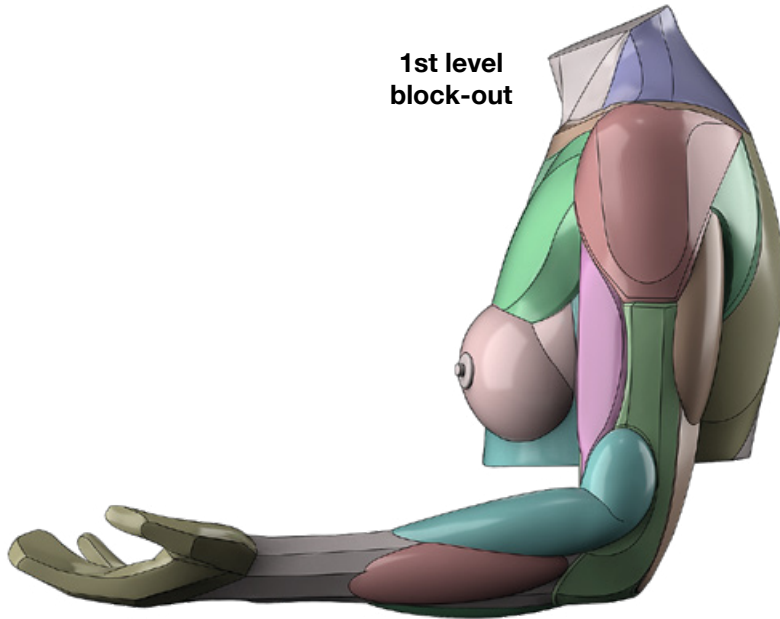
Skin



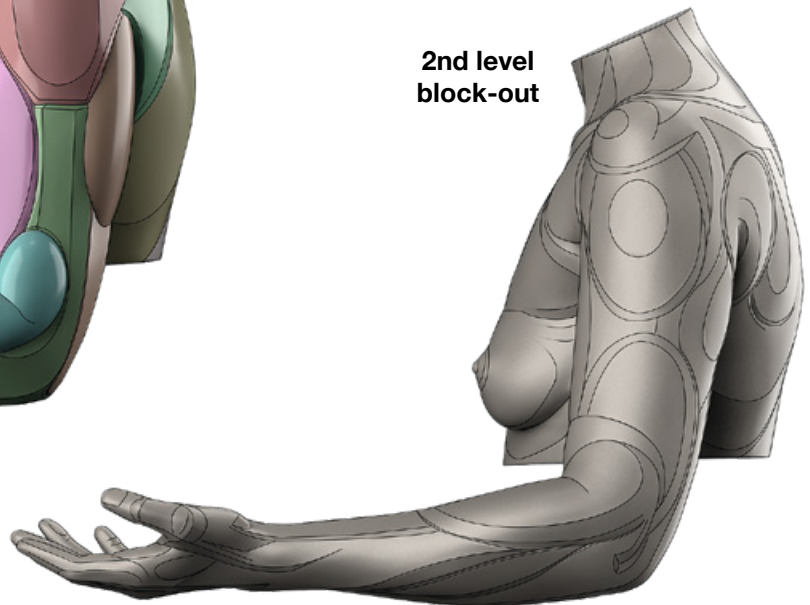
Muscles



1st level
block-out



2nd level
block-out



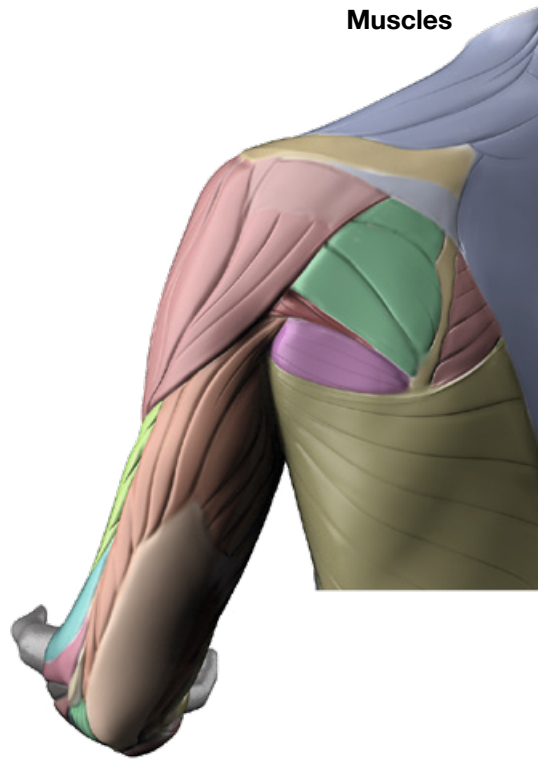
F8 – Bent supinated arm

Back

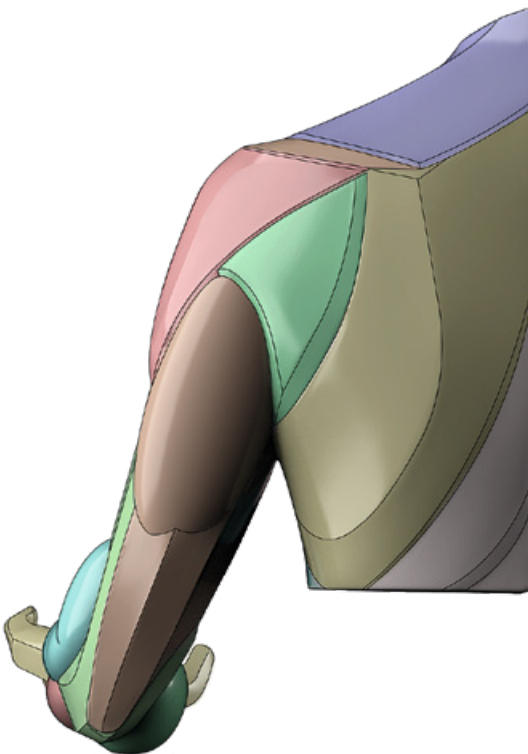
Skin



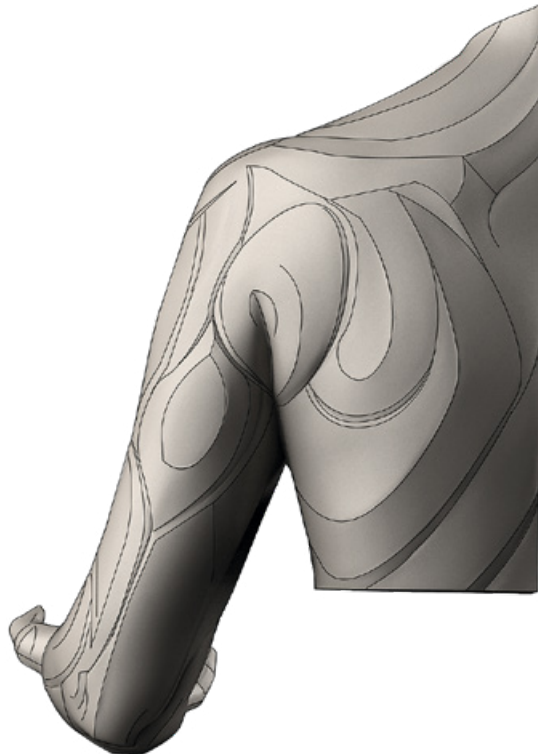
Muscles



1st level block-out



2nd level block-out



M9 – Bent neutral arm

Front

Skin



Muscles



1st level block-out

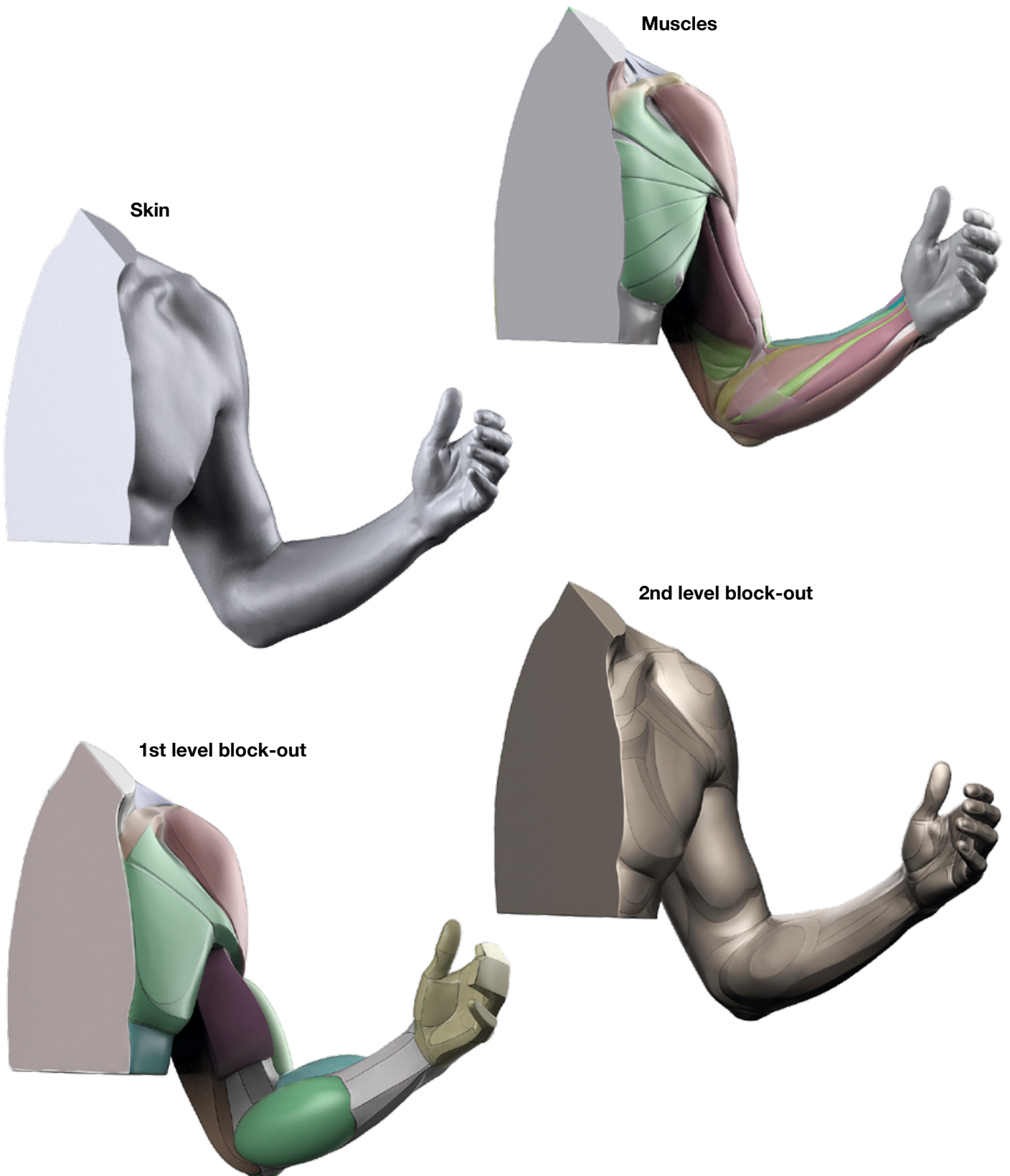


2nd level block-out



M9 – Bent neutral arm

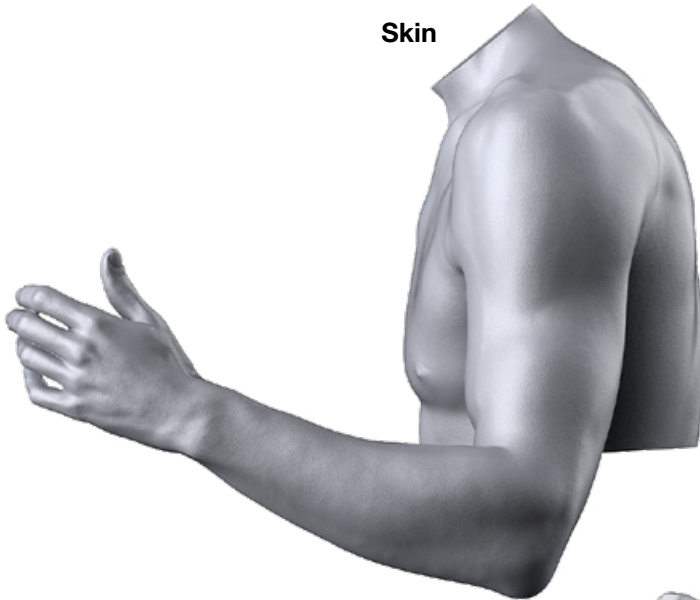
Medial view



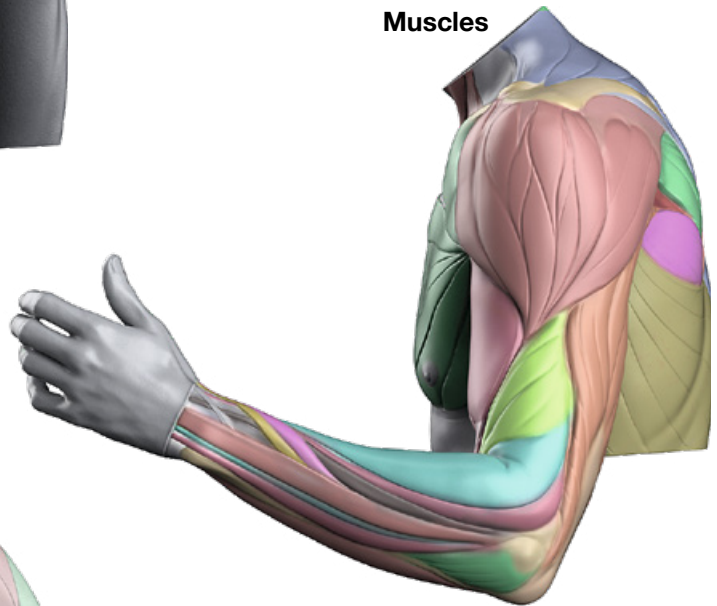
M9 – Bent neutral arm

Lateral view

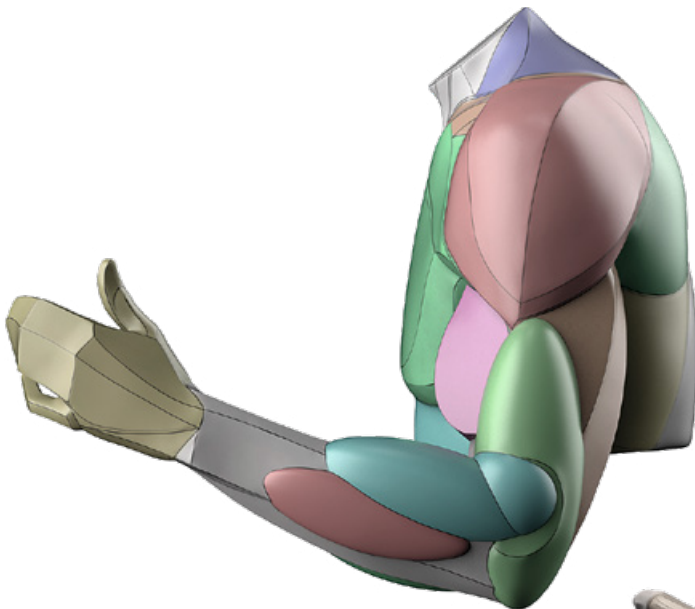
Skin



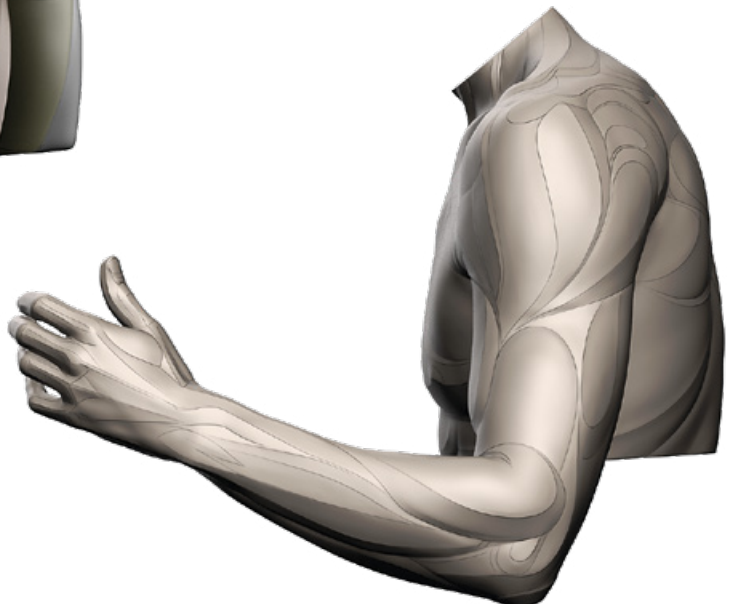
Muscles



1st level block-out



2nd level block-out



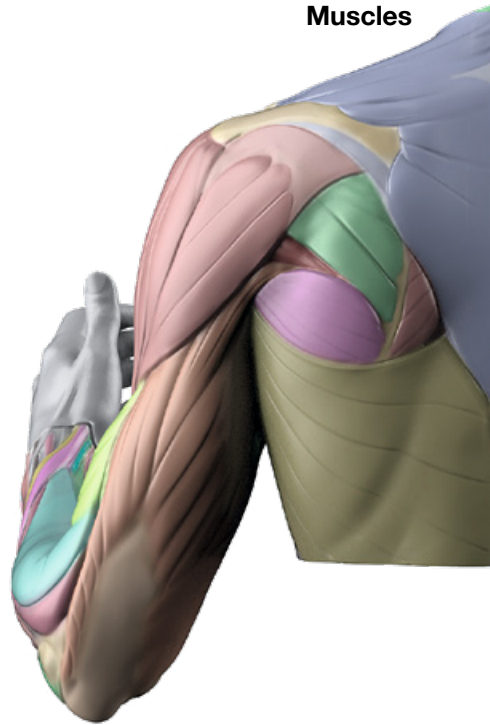
M9 – Bent neutral arm

Back

Skin



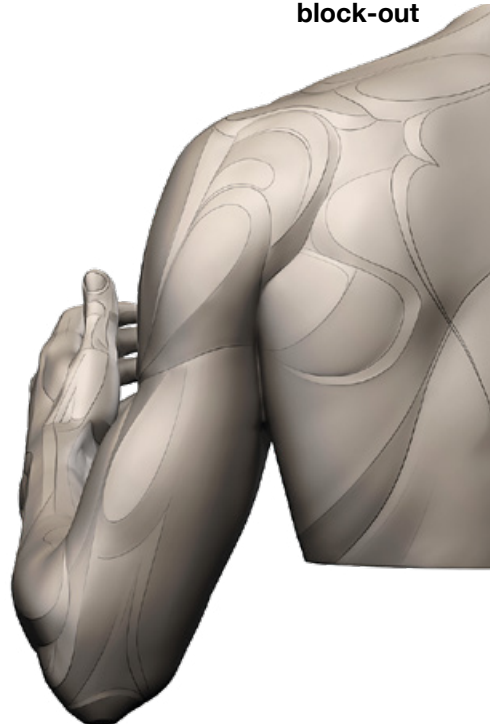
Muscles



1st level
block-out



2nd level
block-out



F9 – Bent neutral arm

Front

Skin



Muscles



1st level block-out

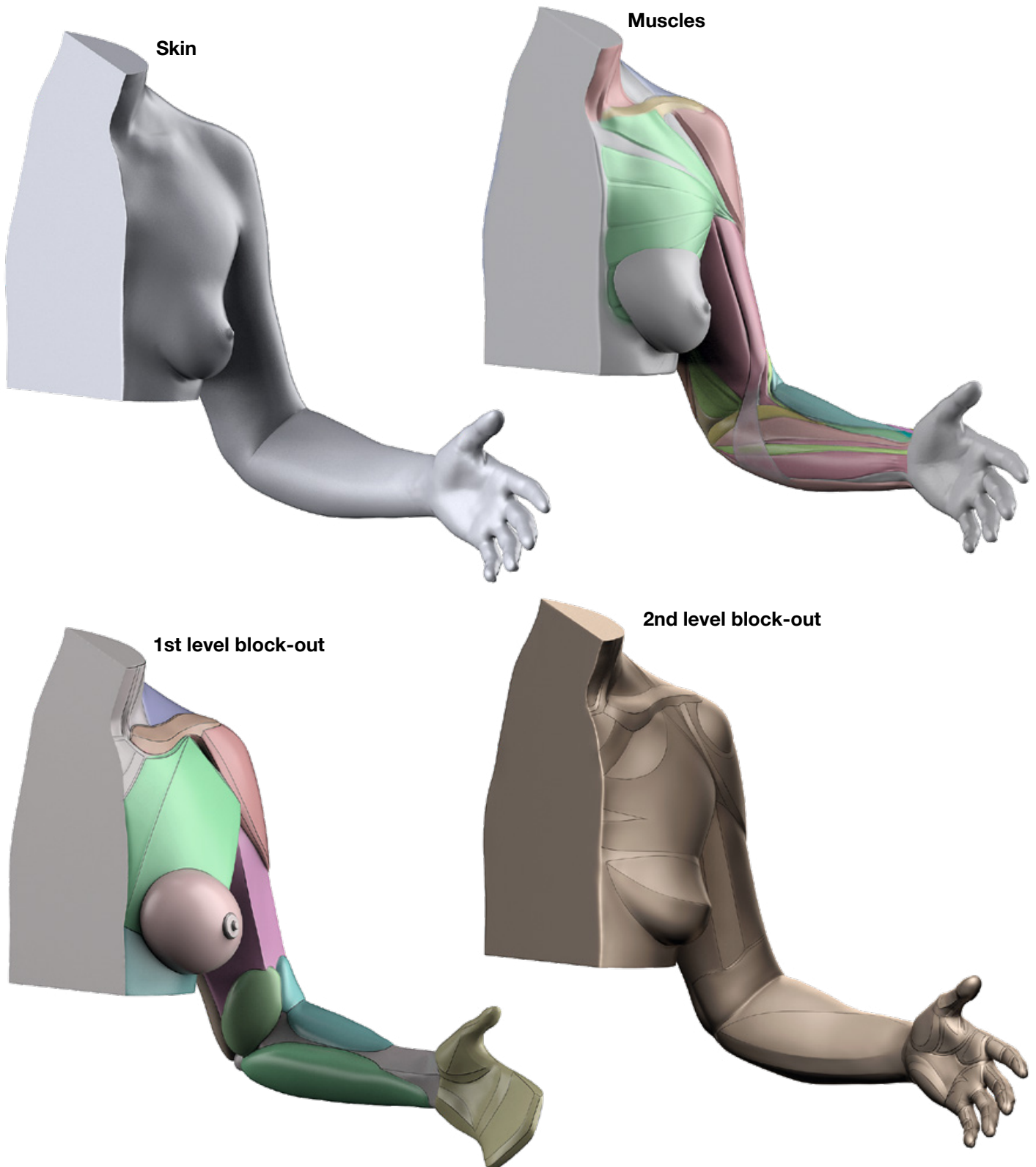


2nd level block-out



F9 – Bent neutral arm

Medial view

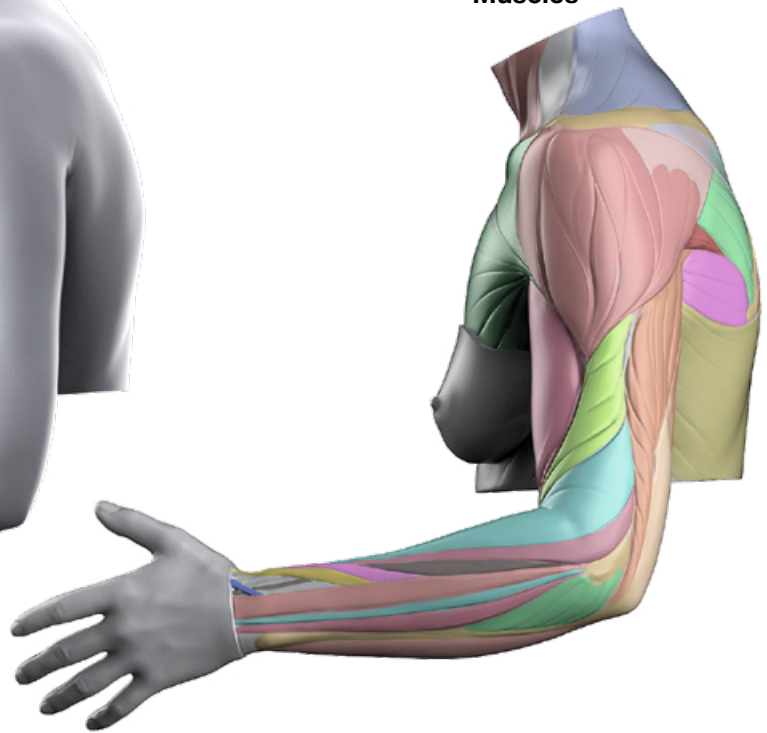
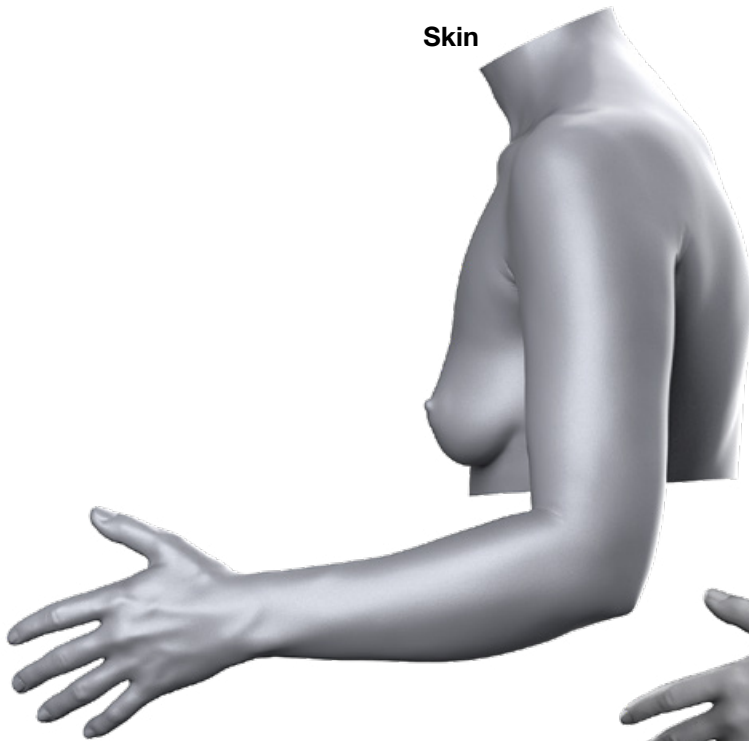


F9 – Bent neutral arm

Lateral view

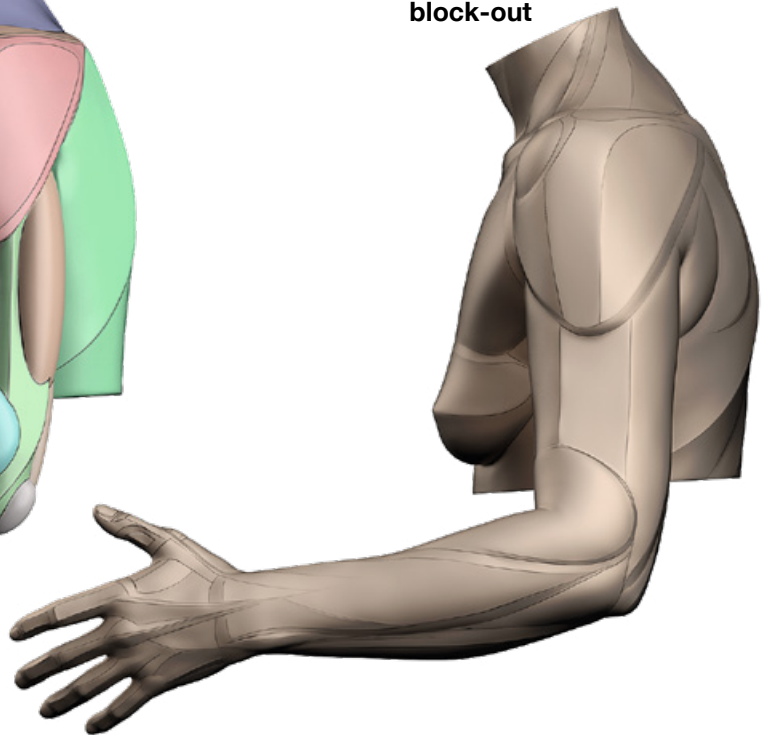
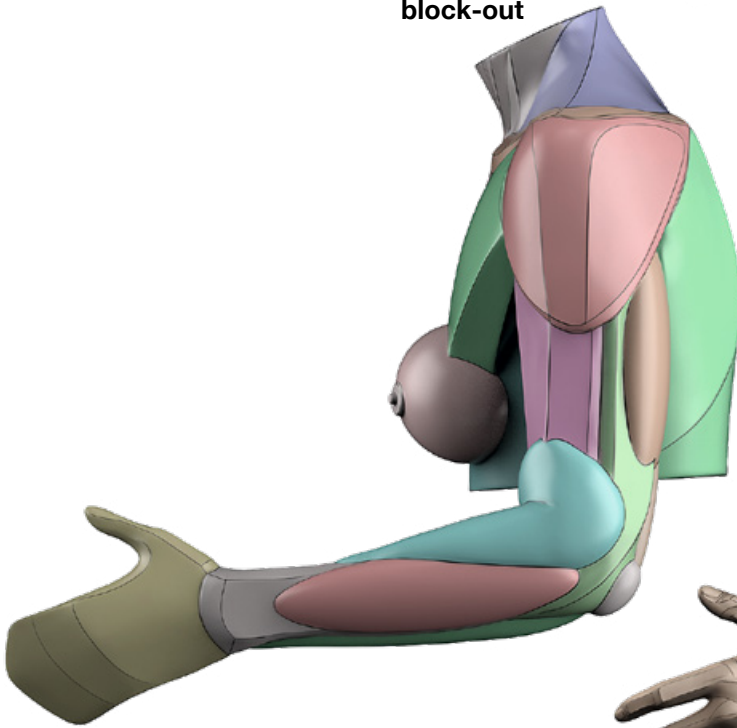
Skin

Muscles



1st level
block-out

2nd level
block-out



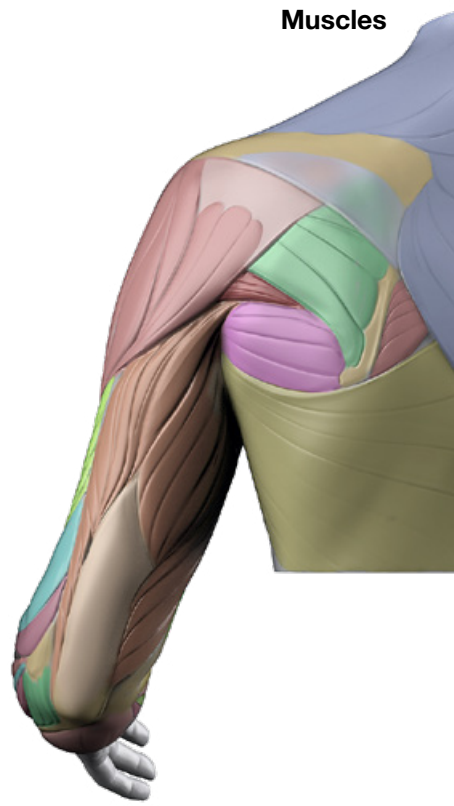
F9 – Bent neutral arm

Back

Skin



Muscles



1st level
block-out



2nd level
block-out



M10 – Bent pronated arm

Front

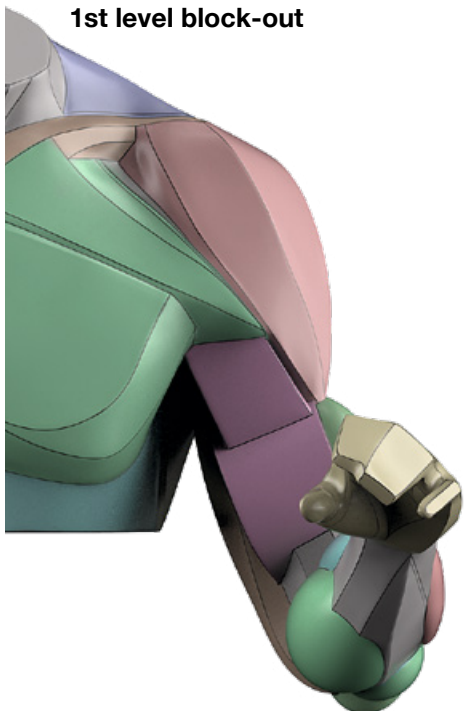
Skin



Muscles



1st level block-out

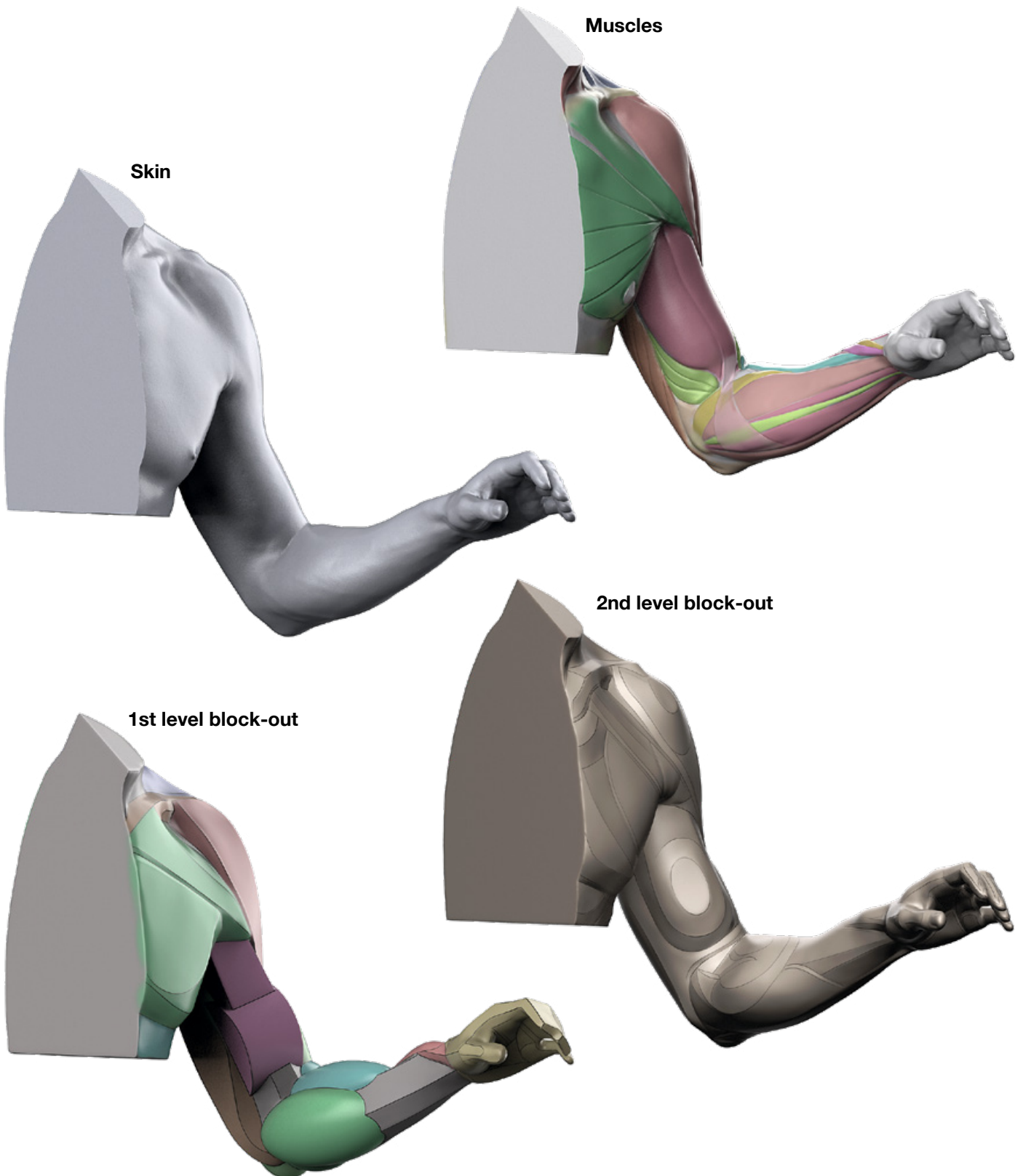


2nd level block-out



M10 – Bent pronated arm

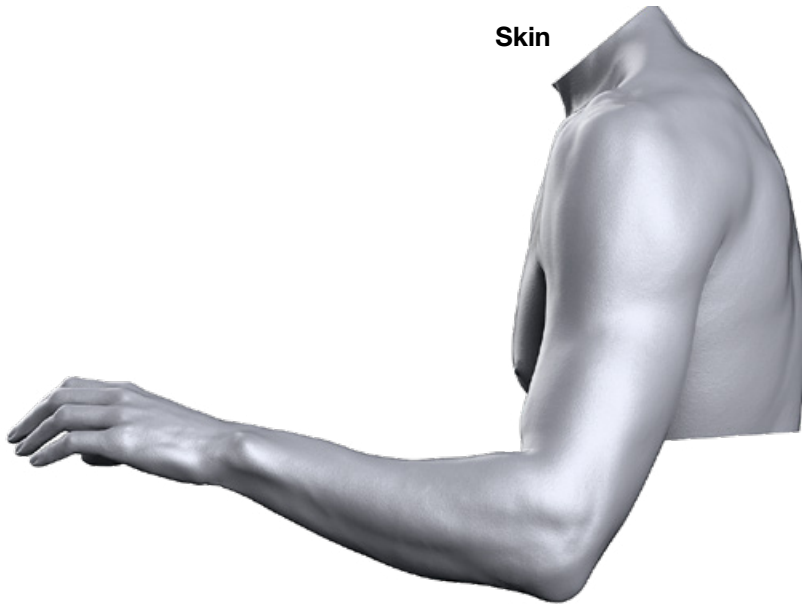
Medial view



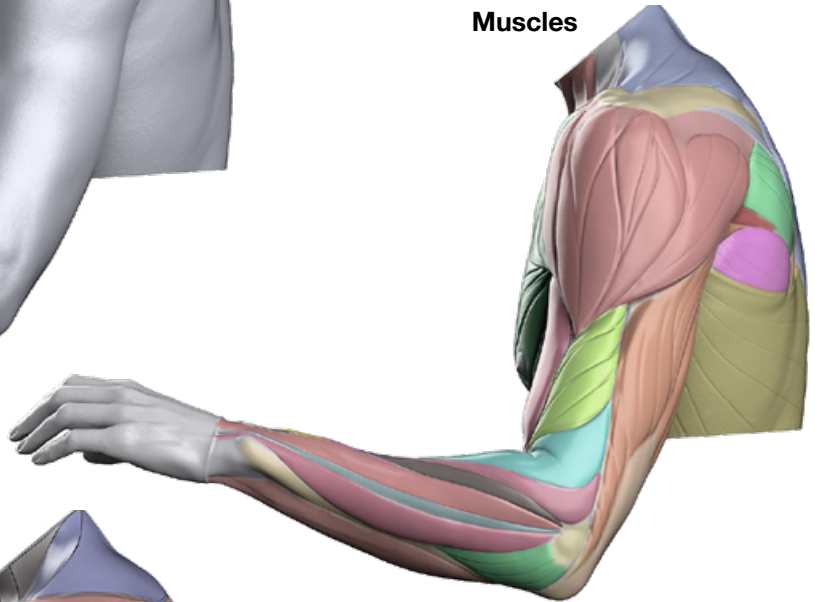
M10 – Bent pronated arm

Lateral view

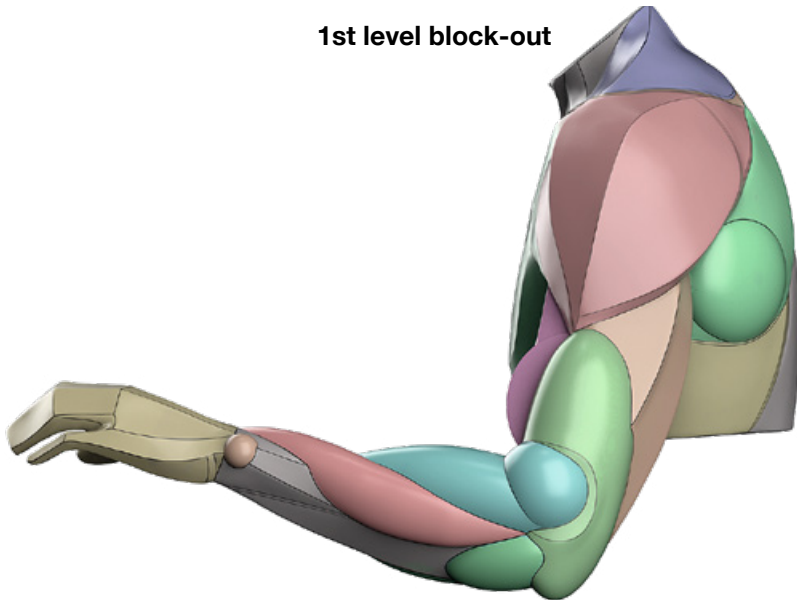
Skin



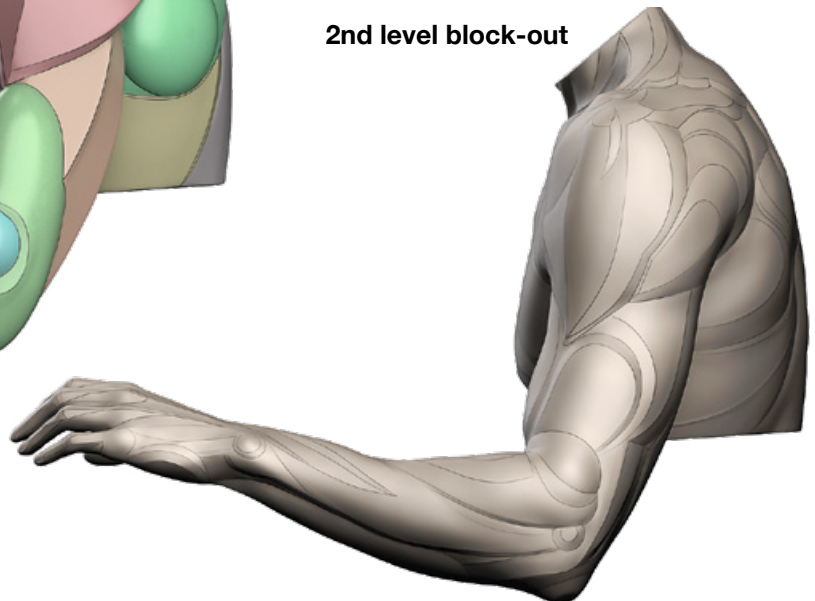
Muscles



1st level block-out



2nd level block-out



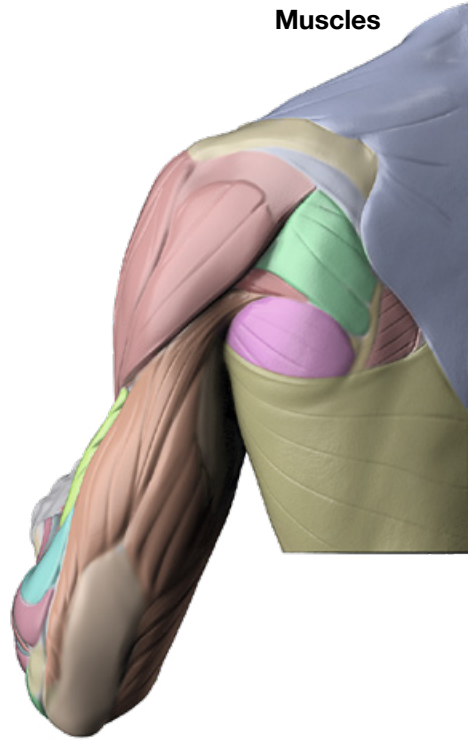
M10 – Bent pronated arm

Back

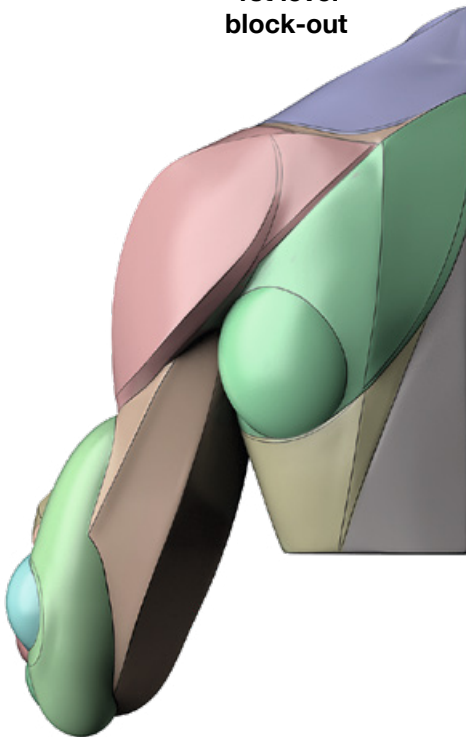
Skin



Muscles



1st level
block-out



2nd level
block-out



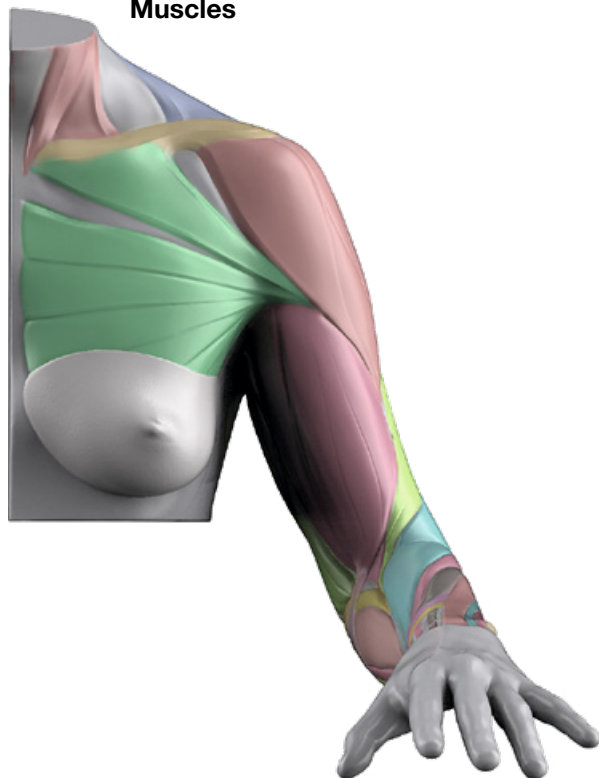
F10 – Bent pronated arm

Front

Skin



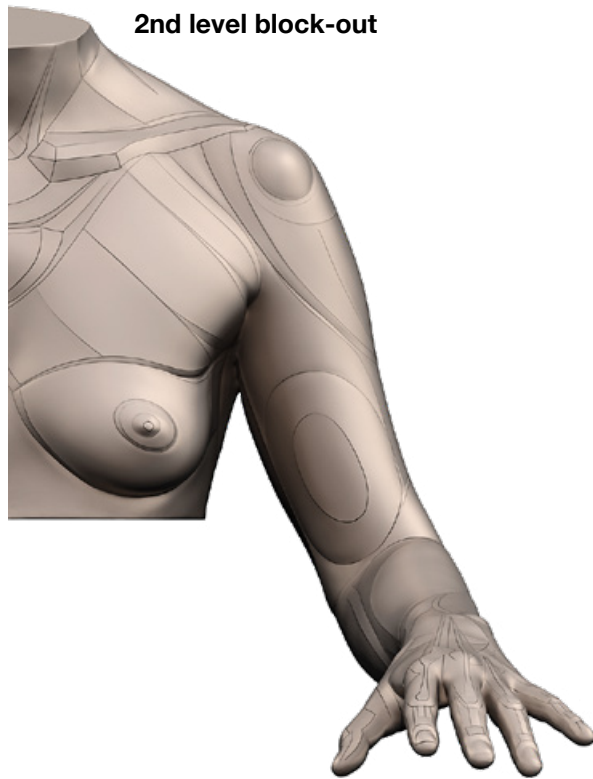
Muscles



1st level block-out

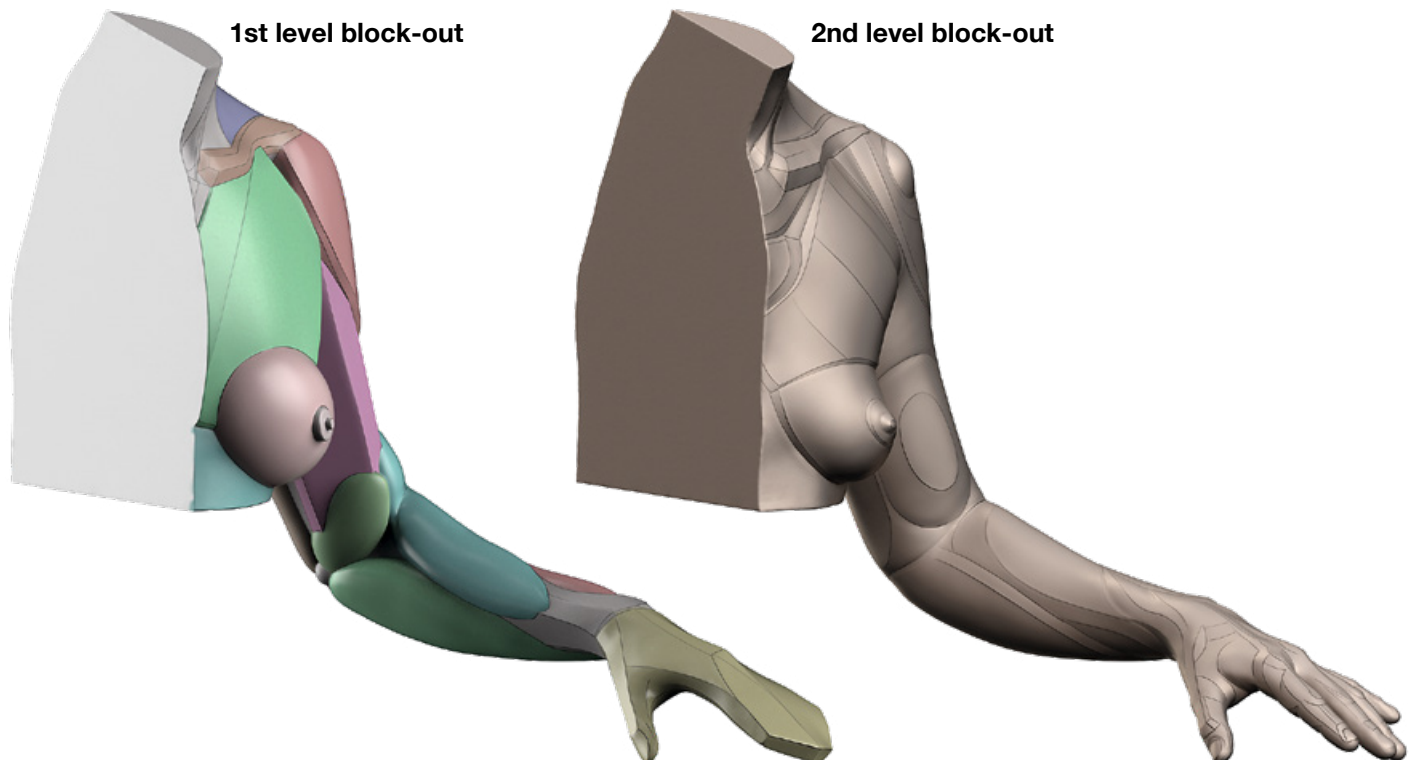
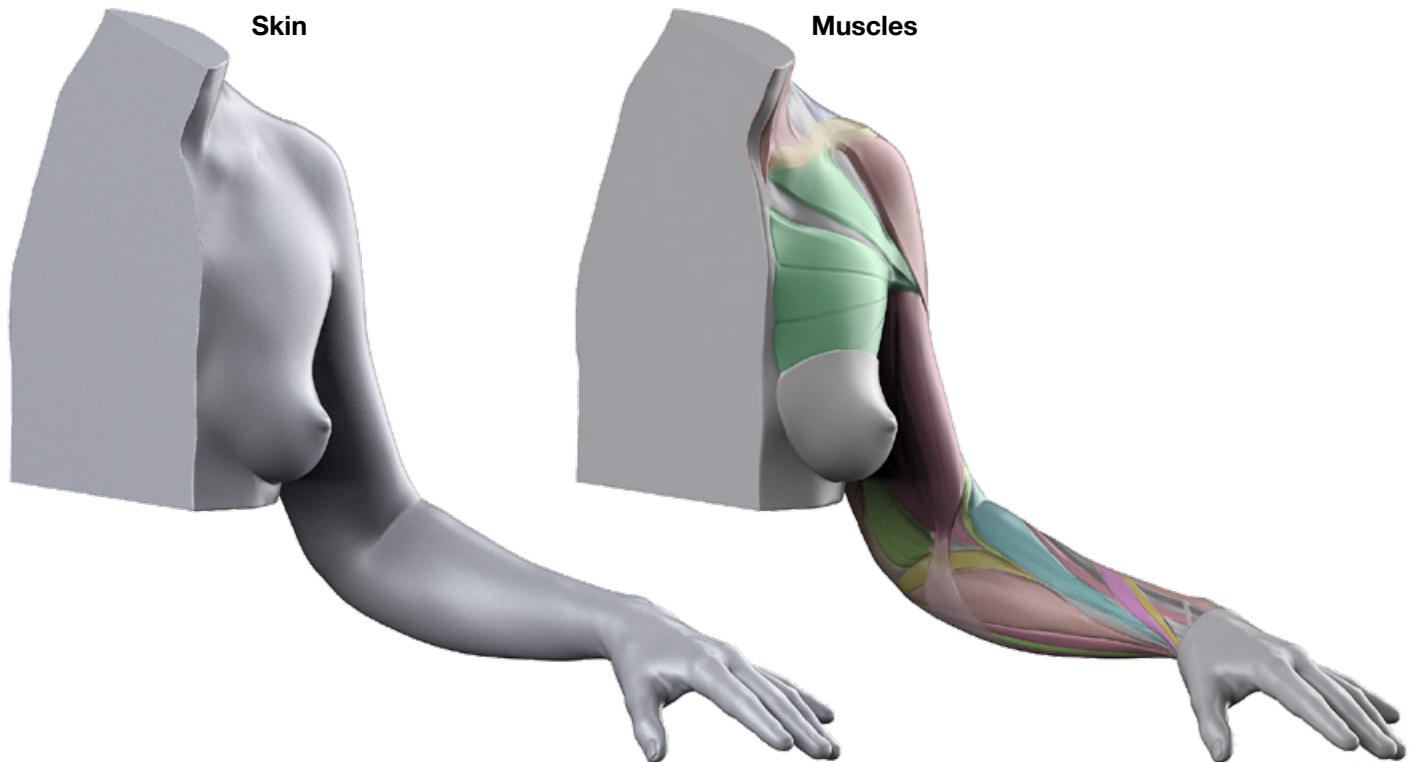


2nd level block-out



F10 – Bent pronated arm

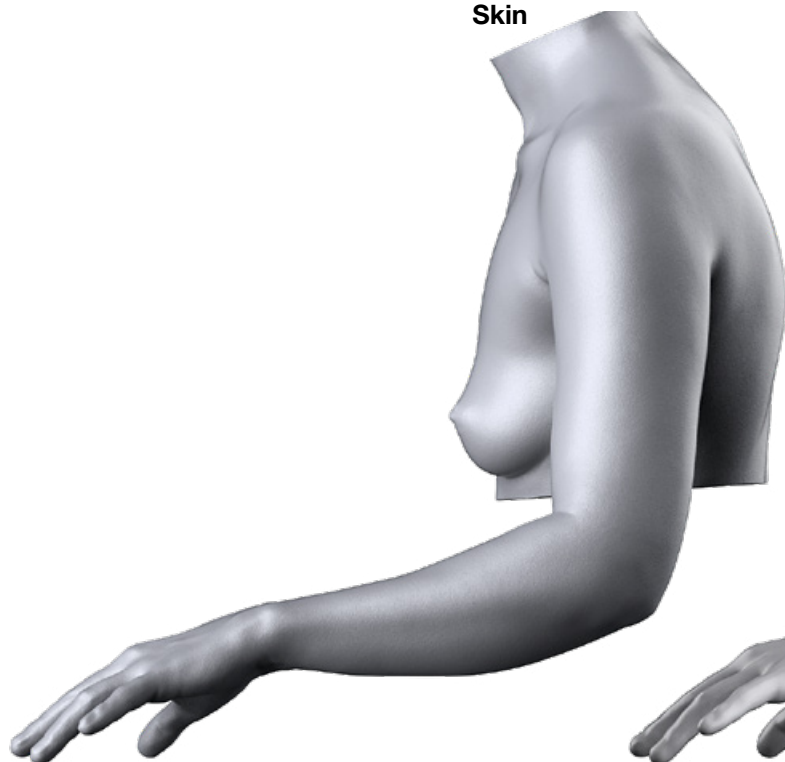
Medial view



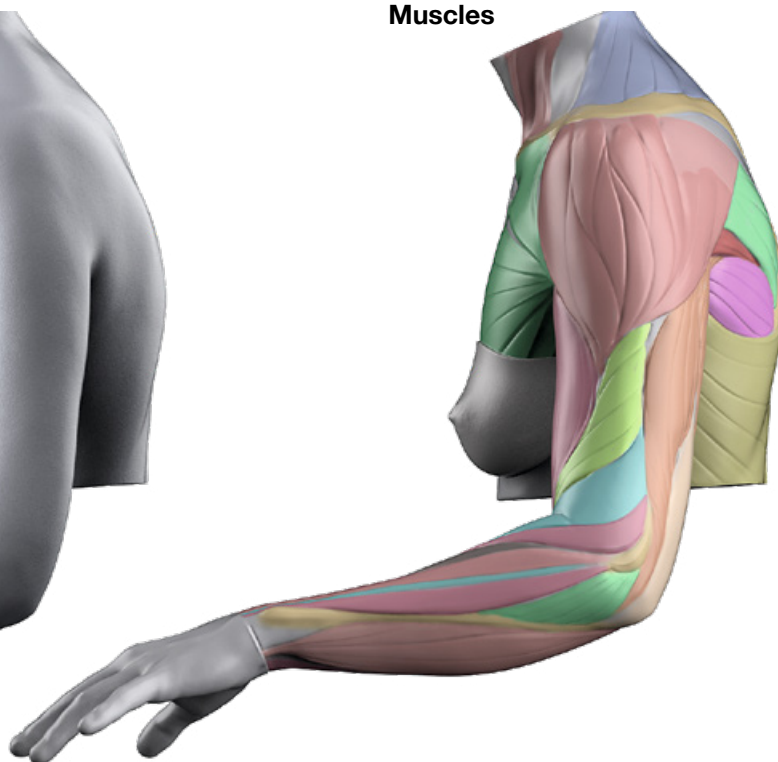
F10 – Bent pronated arm

Lateral view

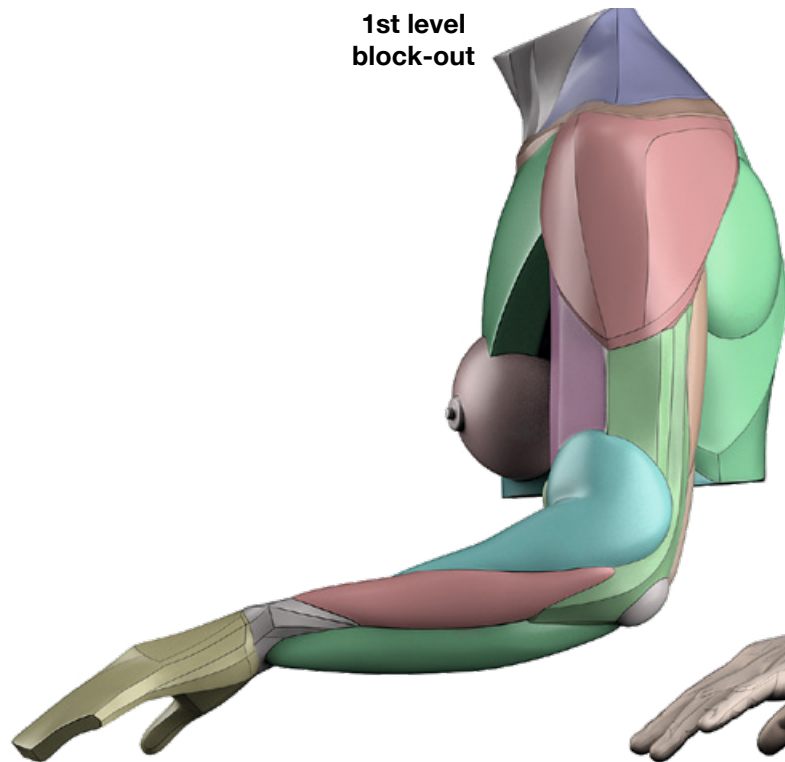
Skin



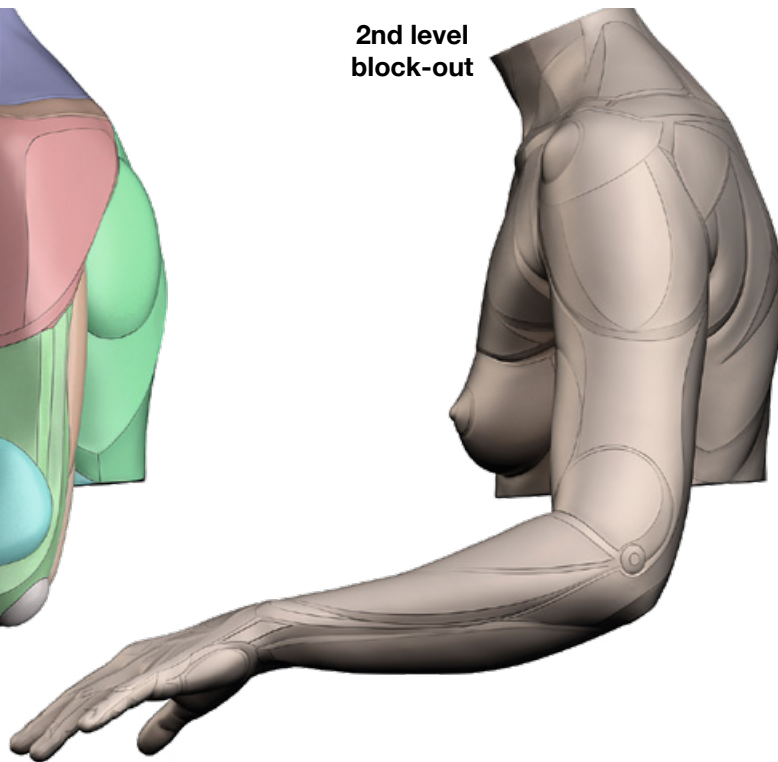
Muscles



1st level
block-out



2nd level
block-out



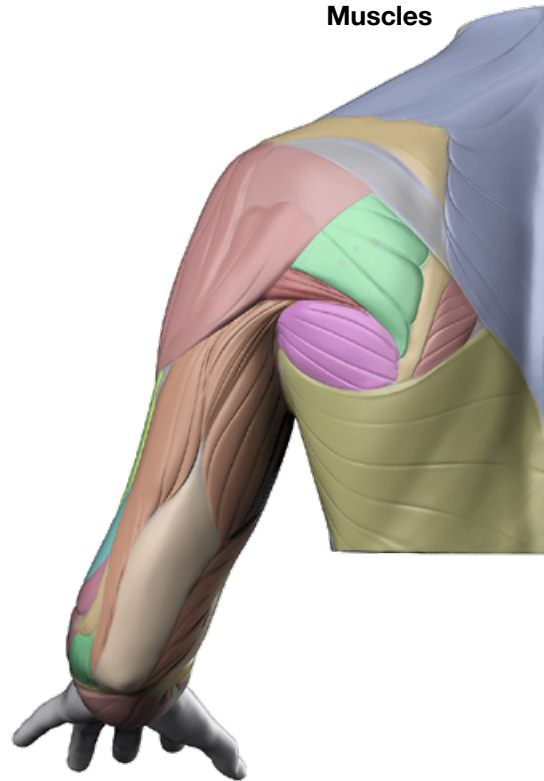
F10 – Bent pronated arm

Back

Skin



Muscles



1st level
block-out



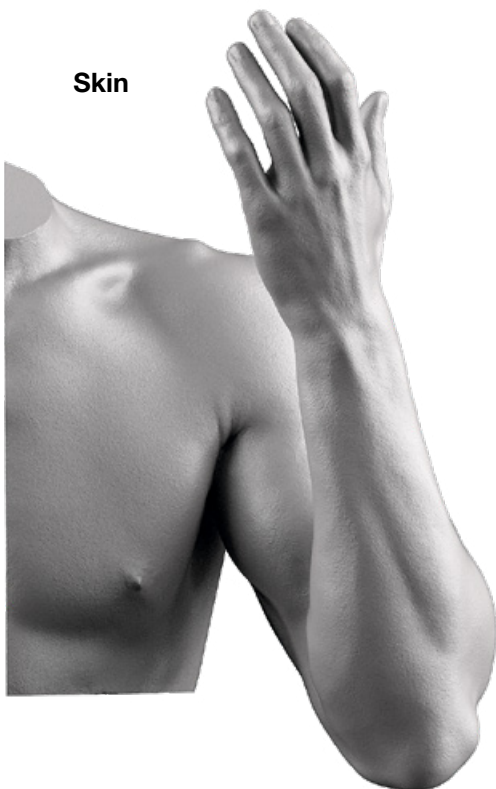
2nd level
block-out



M11 – Fully-flexed supinated arm

Front

Skin



Muscles



1st level block-out



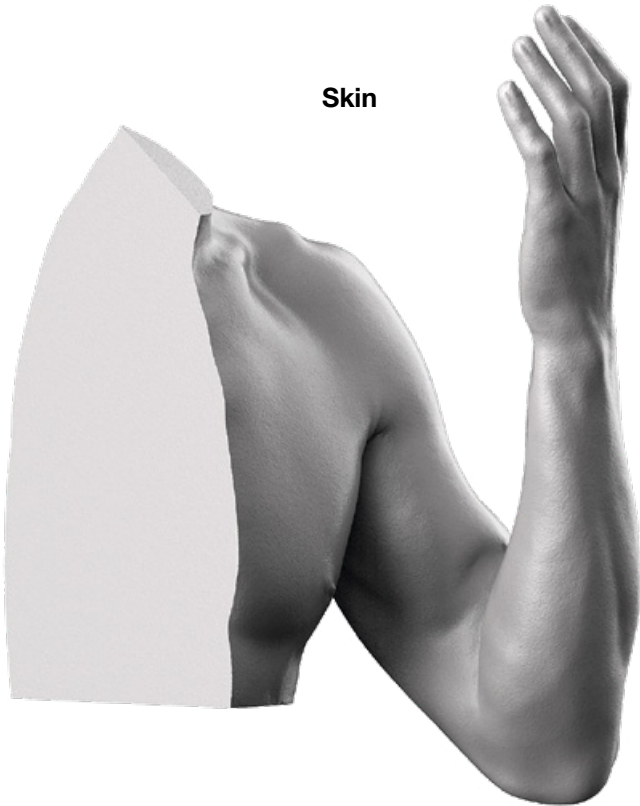
2nd level block-out



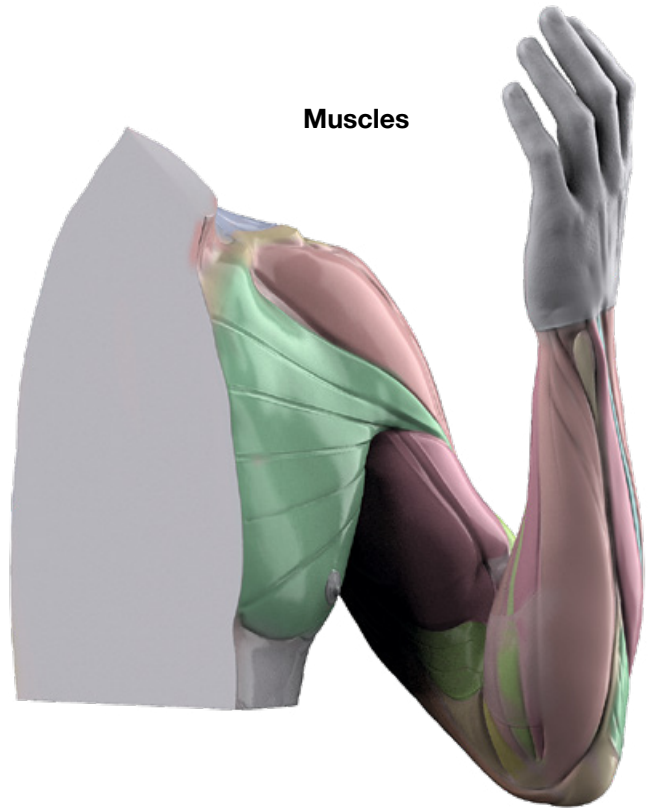
M11 – Fully-flexed supinated arm

Medial view

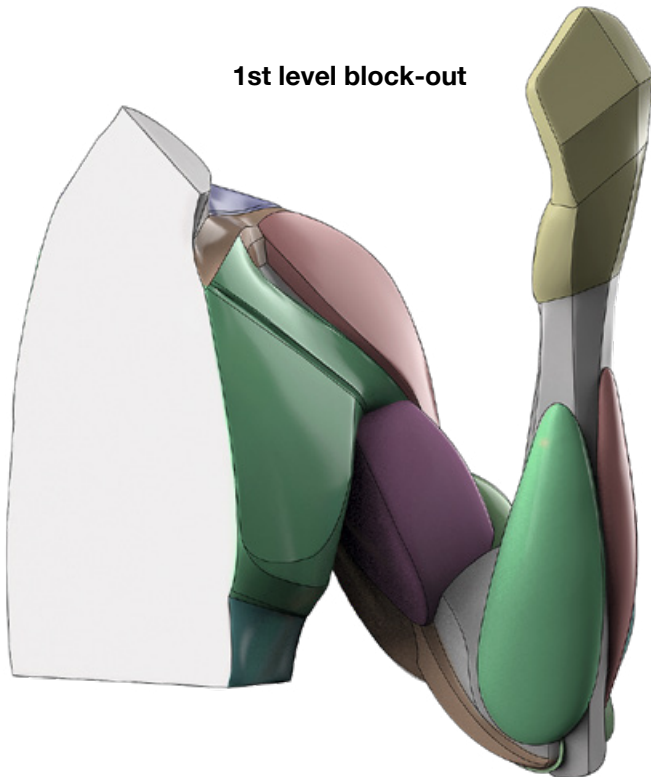
Skin



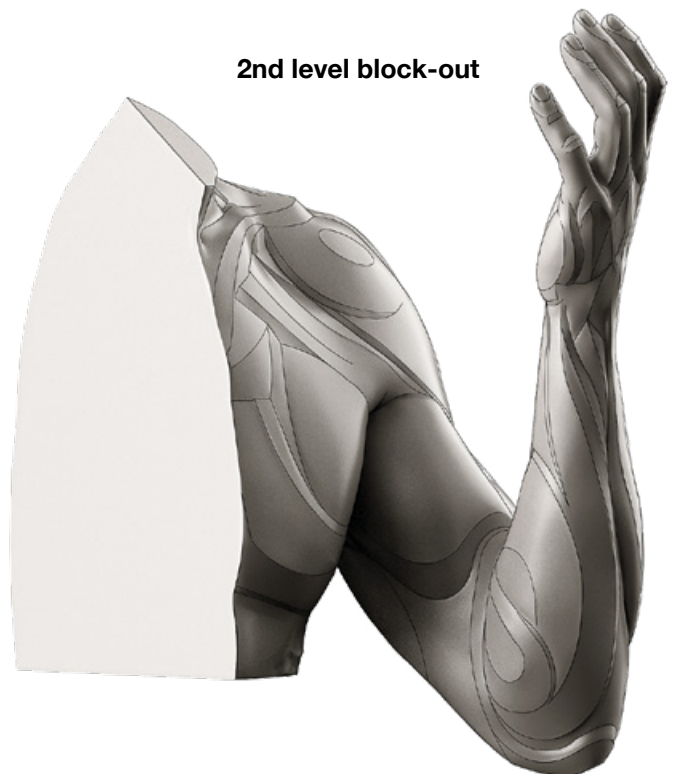
Muscles



1st level block-out

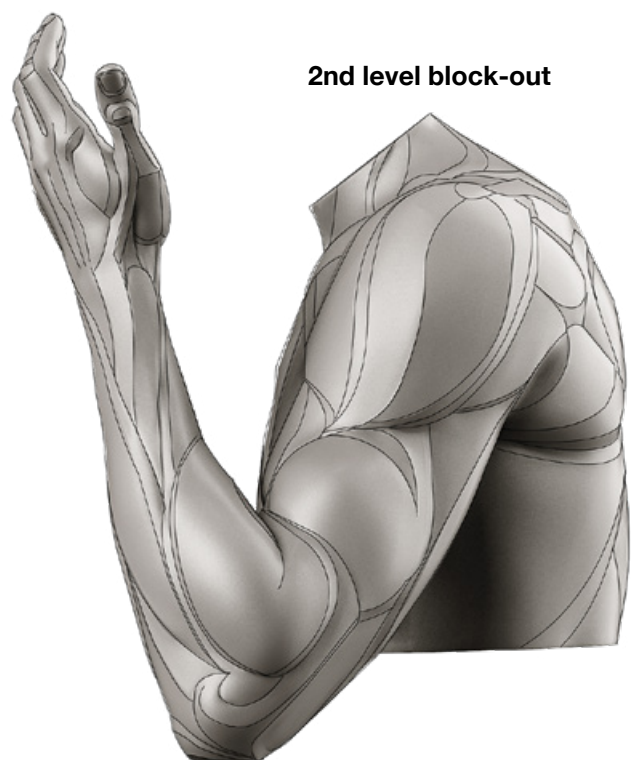
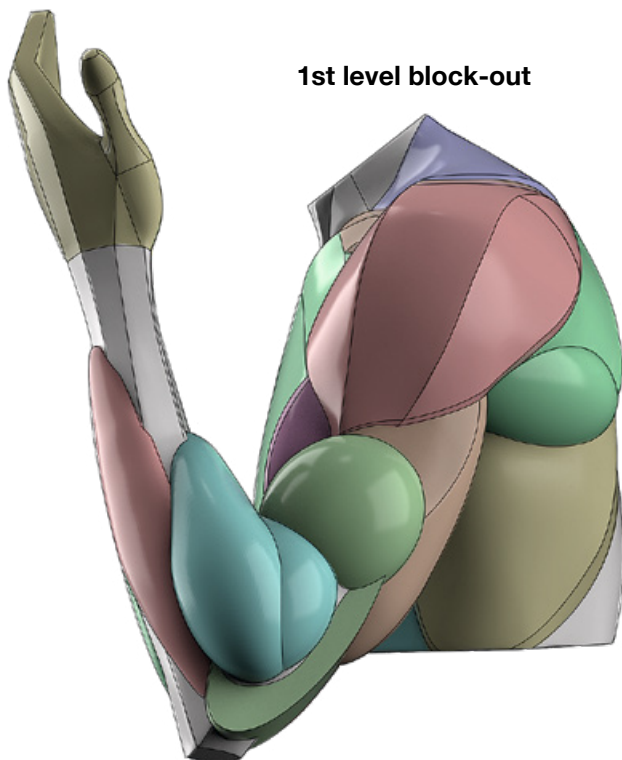
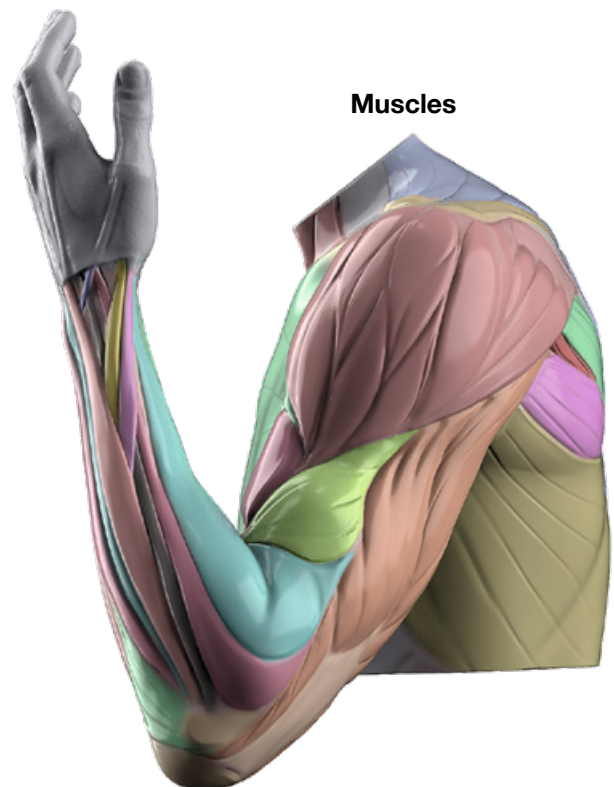
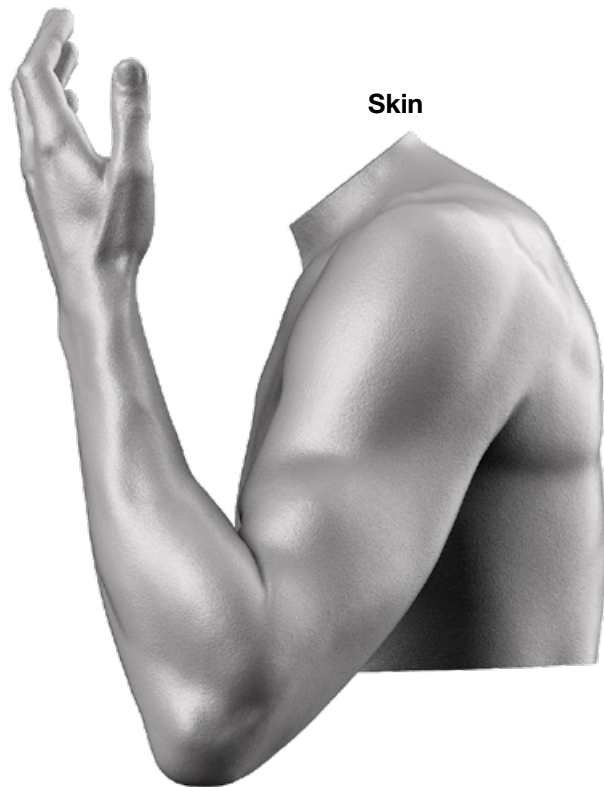


2nd level block-out



M11 – Fully-flexed supinated arm

Lateral view



M11 – Fully-flexed supinated arm

Back



1st level block-out



2nd level block-out



F11 – Fully-flexed supinated arm

Front

Skin



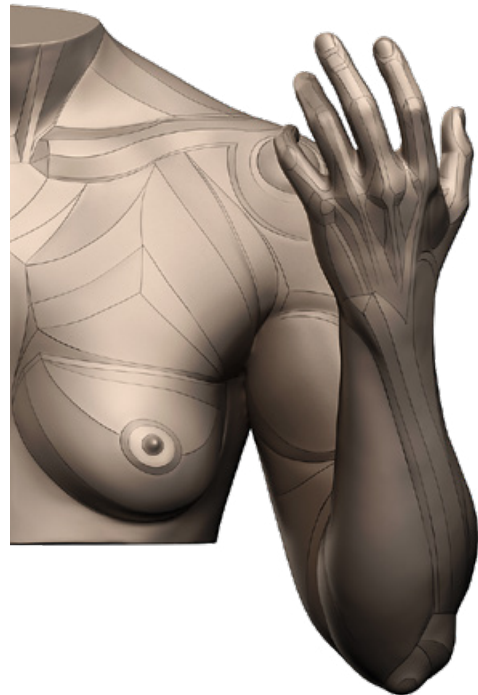
Muscles



1st level block-out

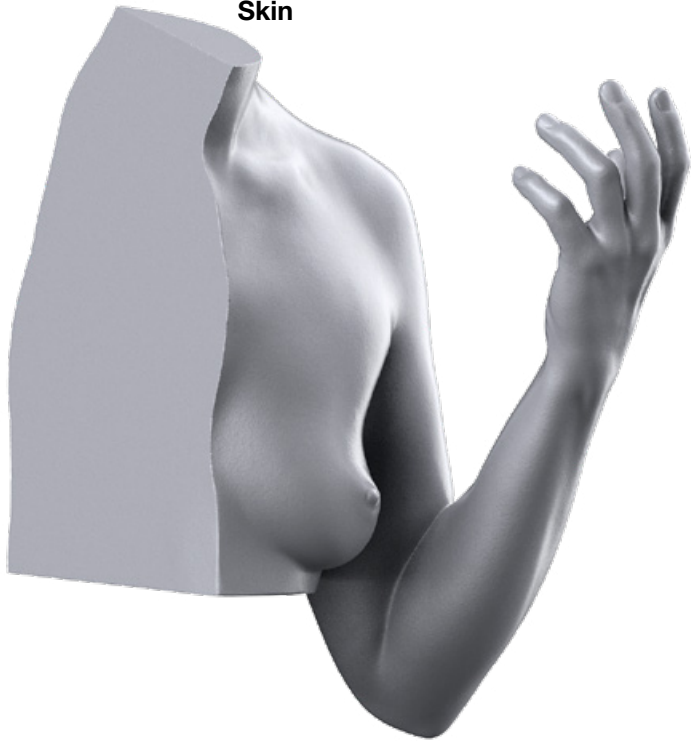
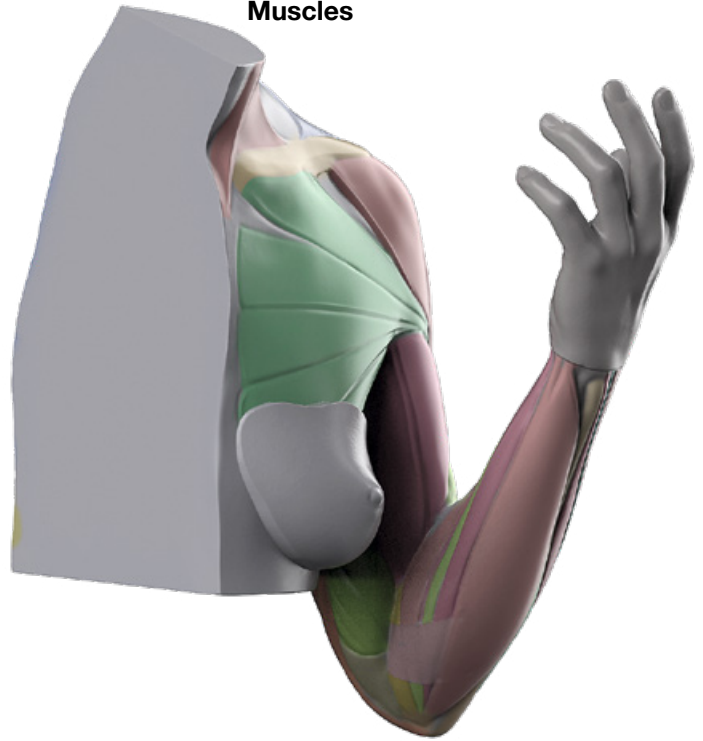
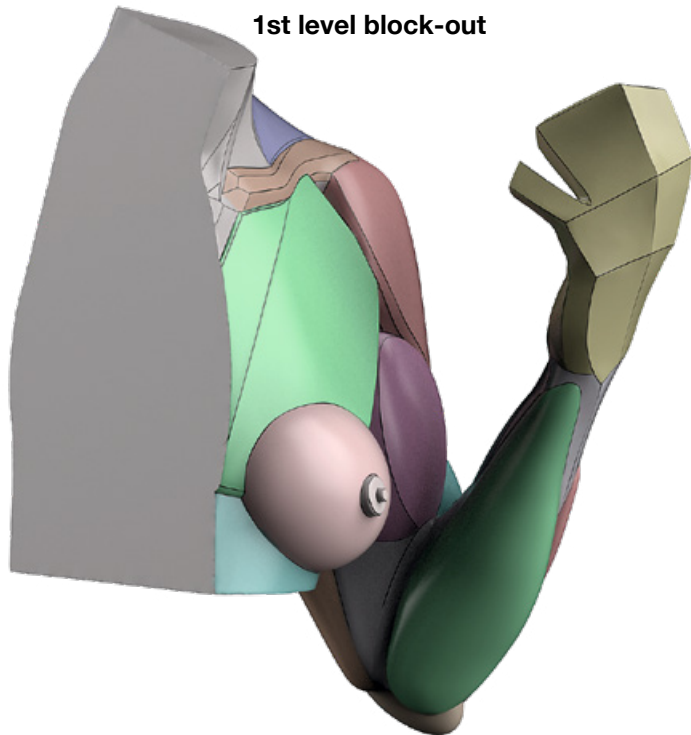
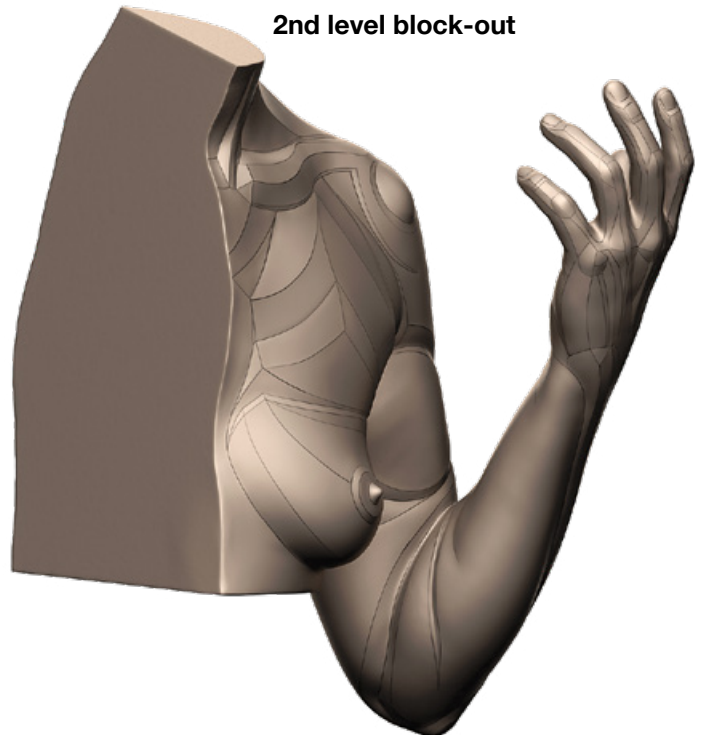


2nd level block-out



F11 – Fully-flexed supinated arm

Medial view

Skin**Muscles****1st level block-out****2nd level block-out**

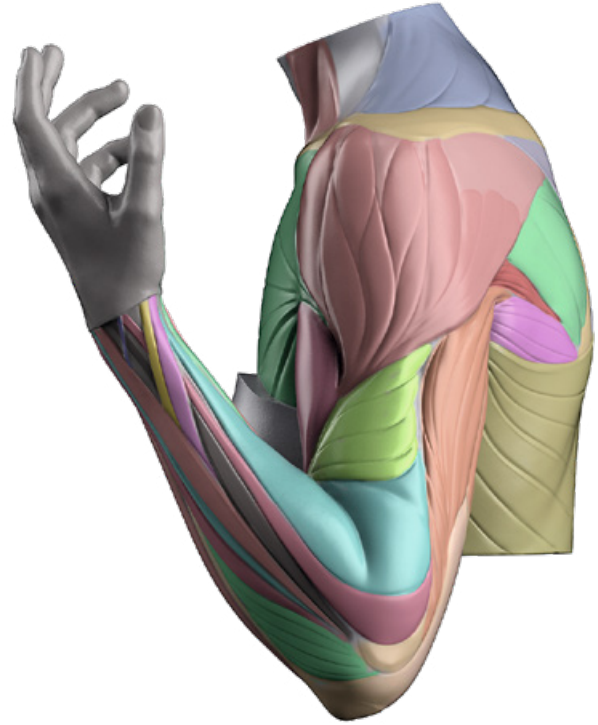
F11 – Fully-flexed supinated arm

Lateral view

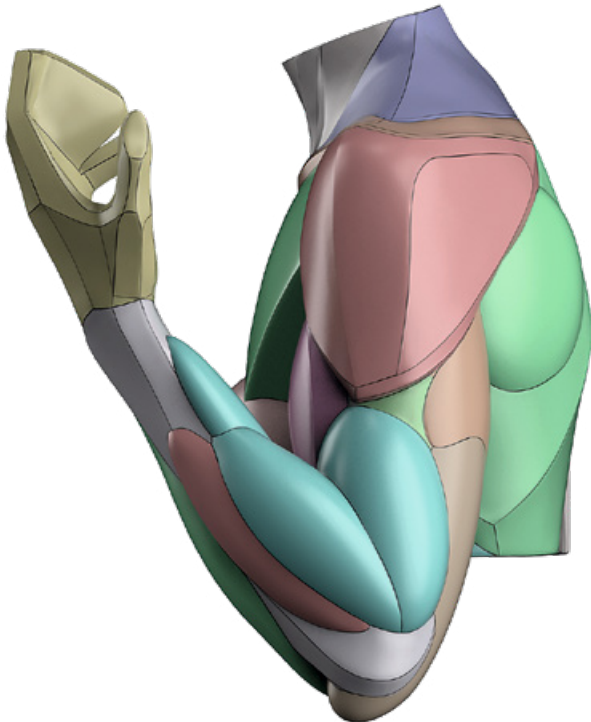
Skin



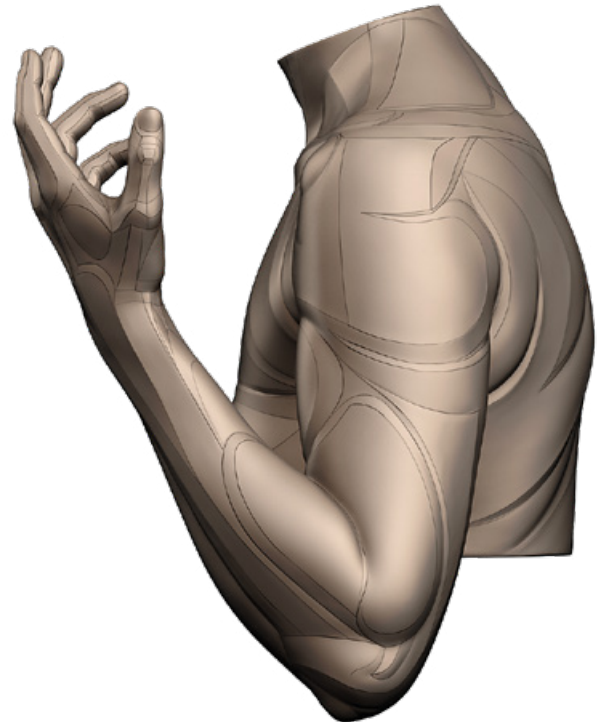
Muscles



1st level block-out

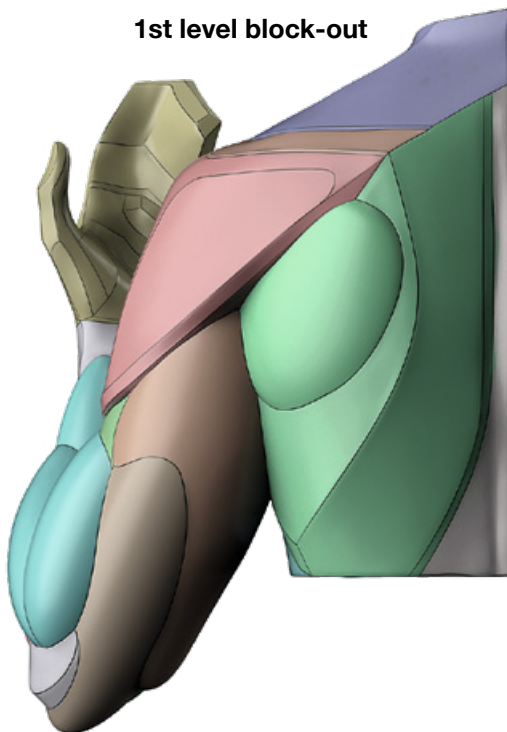
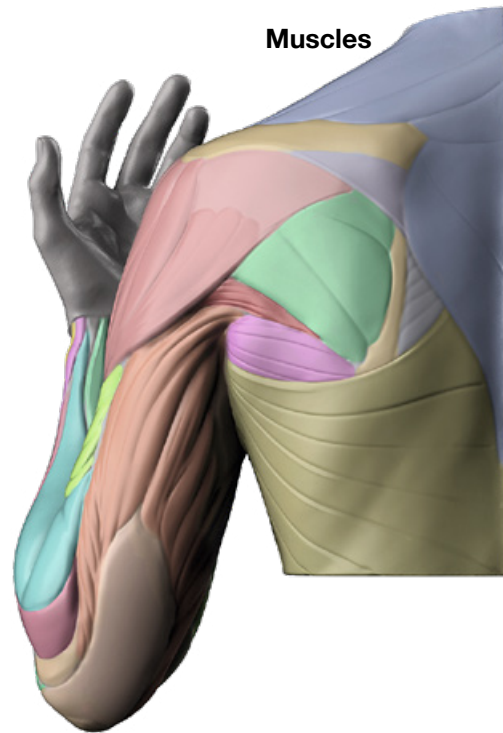


2nd level block-out



F11 – Fully-flexed supinated arm

Back



M12 – Fully-flexed neutral arm

Front

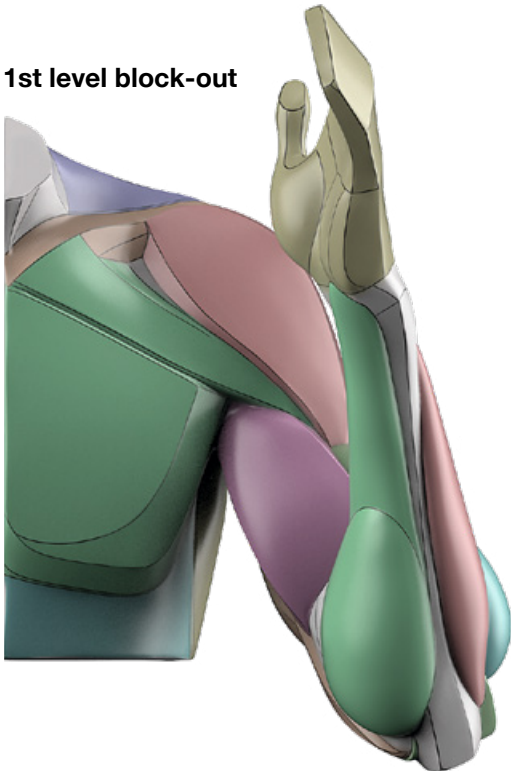
Skin



Muscles



1st level block-out



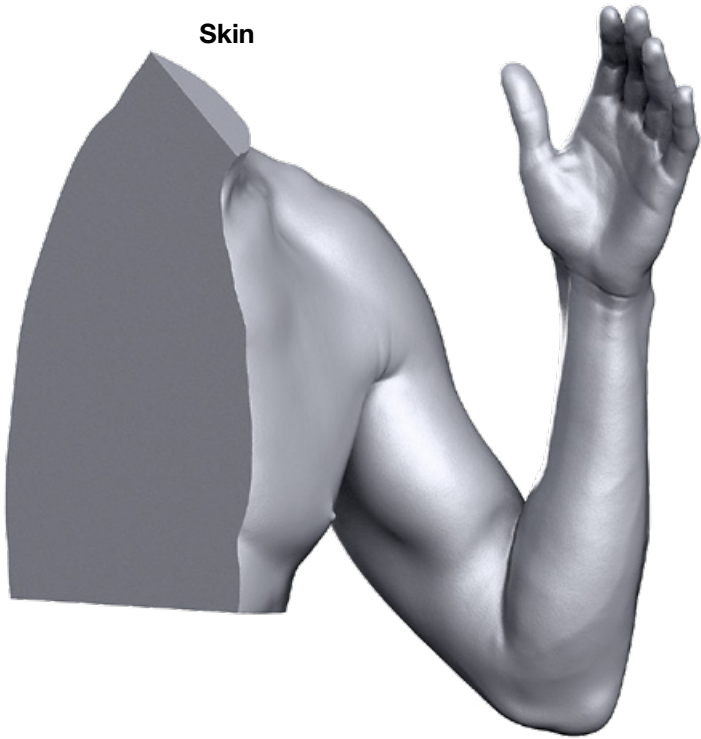
2nd level block-out



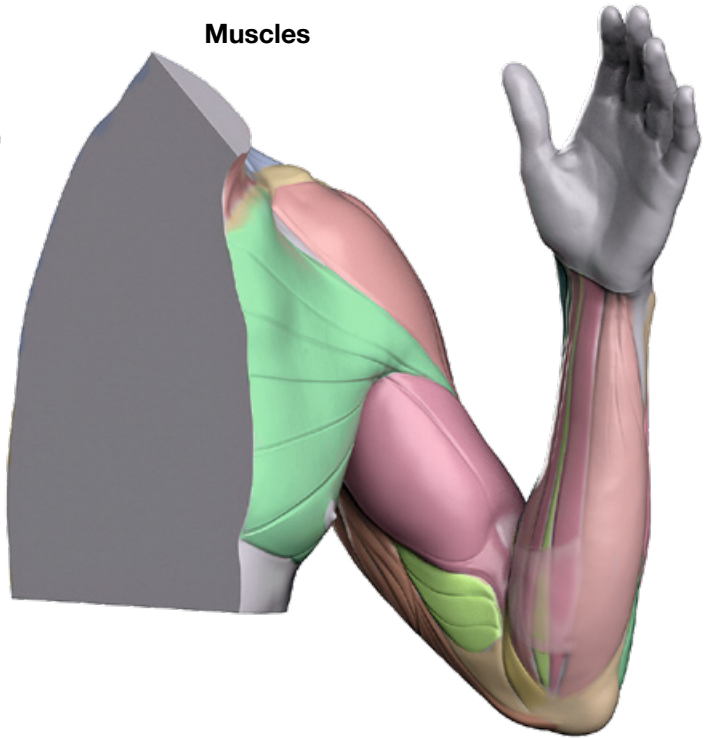
M12 – Fully-flexed neutral arm

Medial view

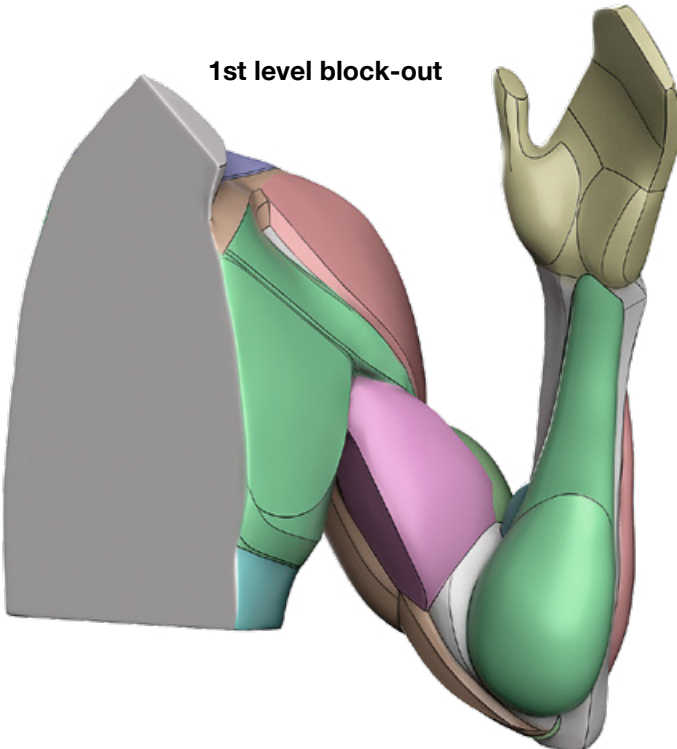
Skin



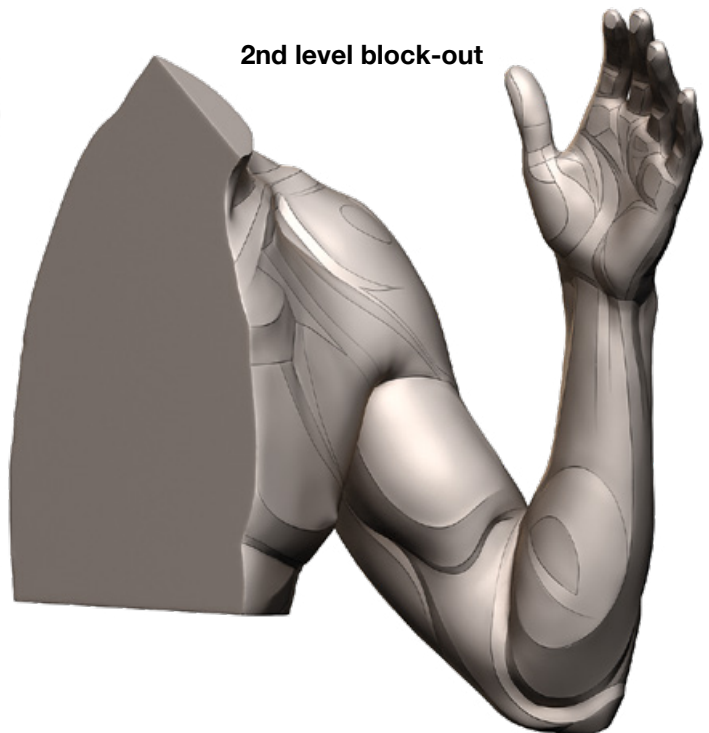
Muscles



1st level block-out

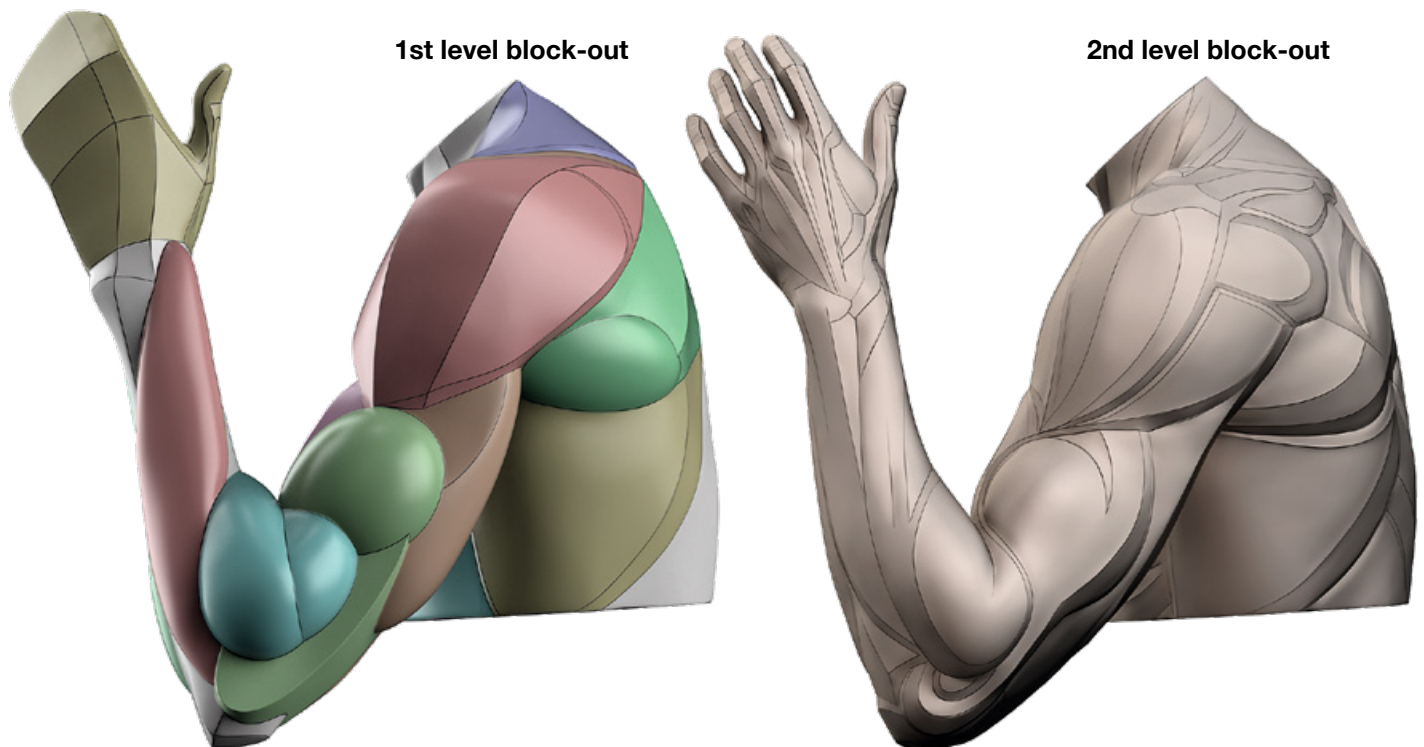
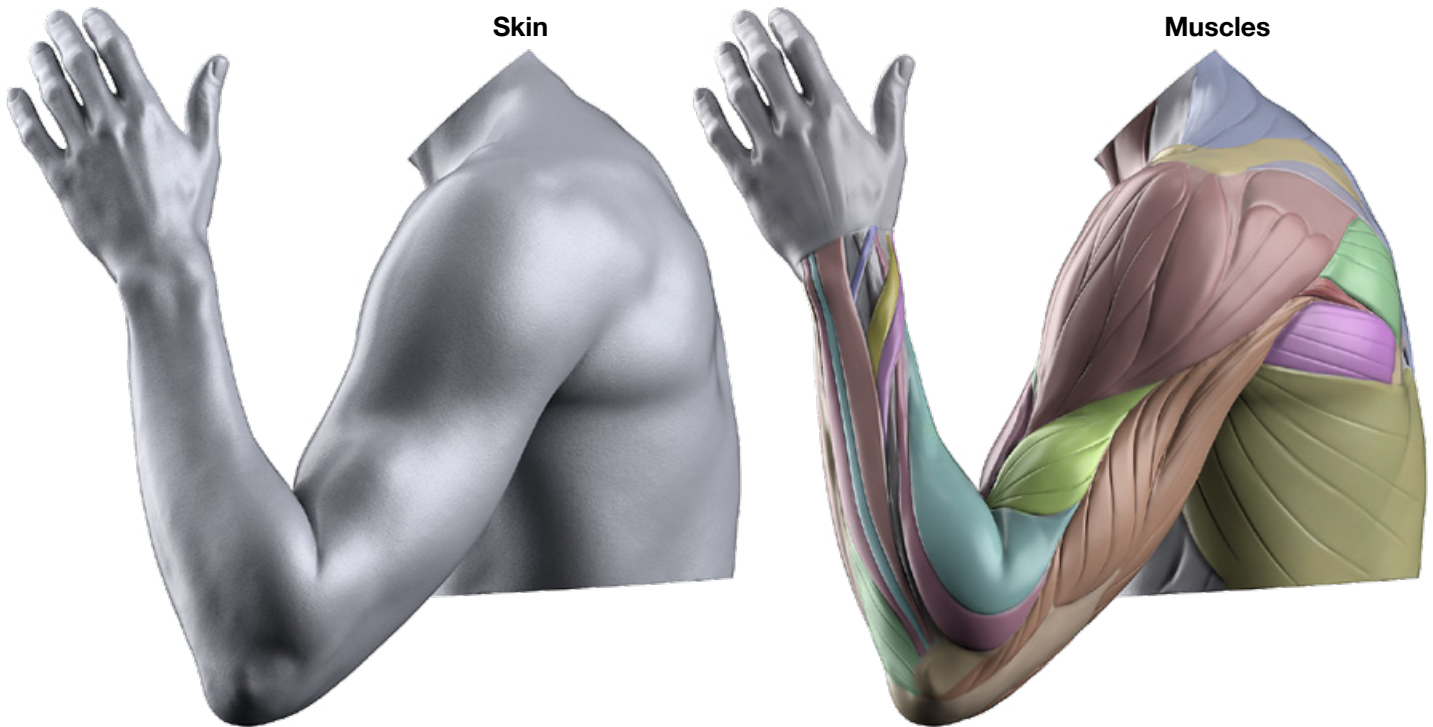


2nd level block-out



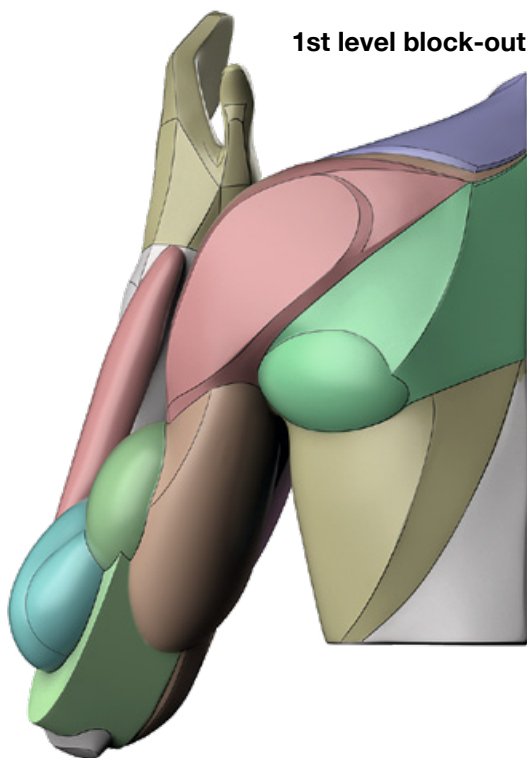
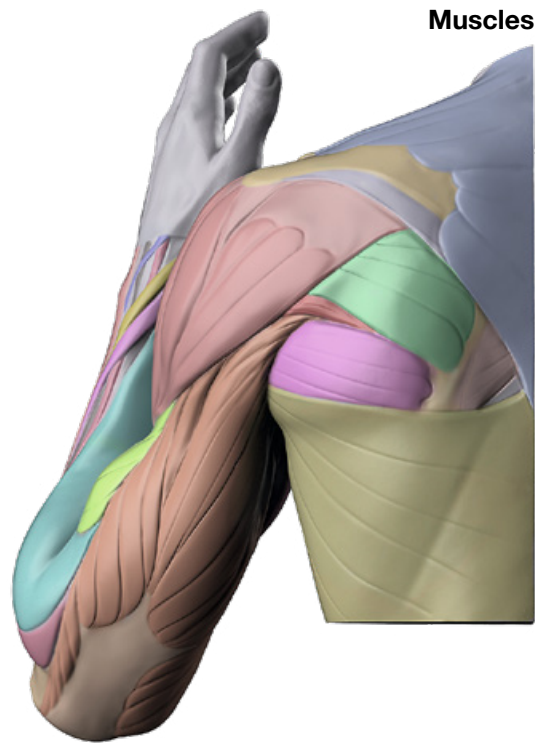
M12 – Fully-flexed neutral arm

Lateral view



M12 – Fully-flexed neutral arm

Back



F12 – Fully-flexed neutral arm

Front



1st level block-out

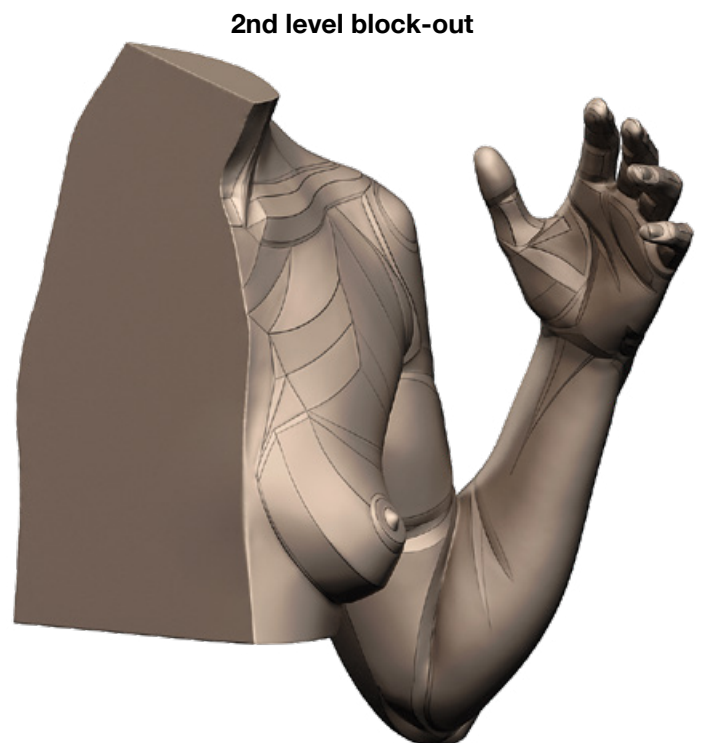
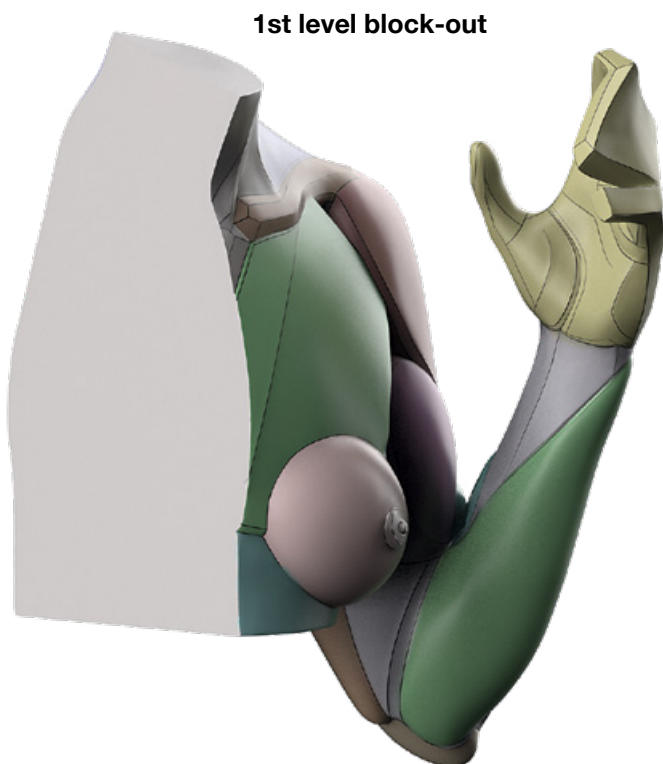
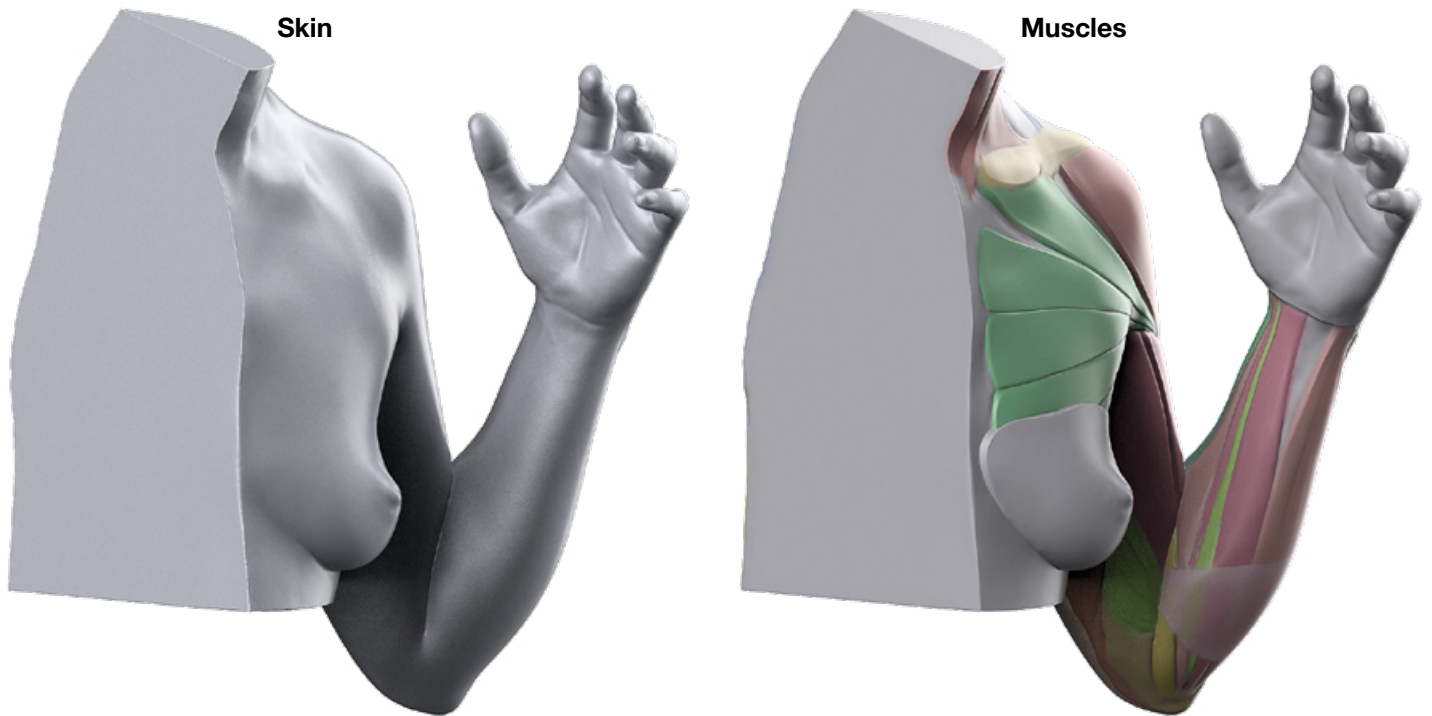


2nd level block-out



F12 – Fully-flexed neutral arm

Medial view



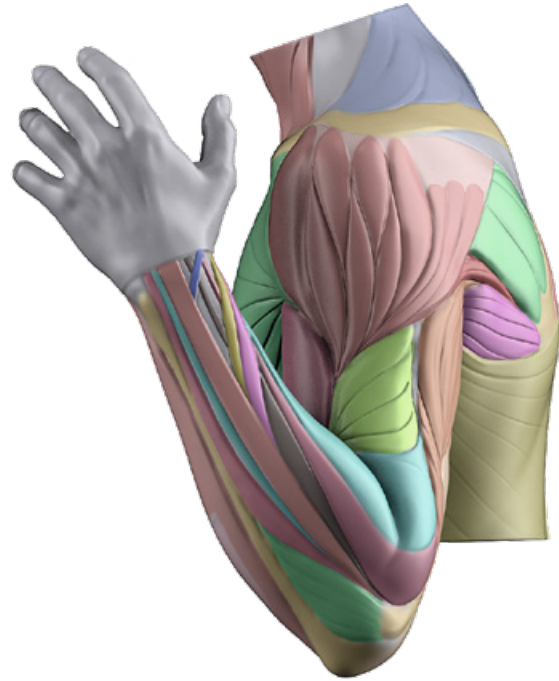
F12 – Fully-flexed neutral arm

Lateral view

Skin



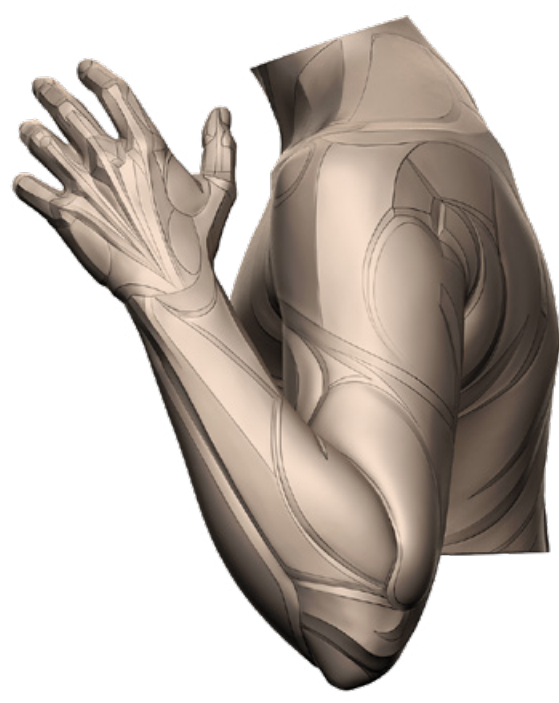
Muscles



1st level block-out

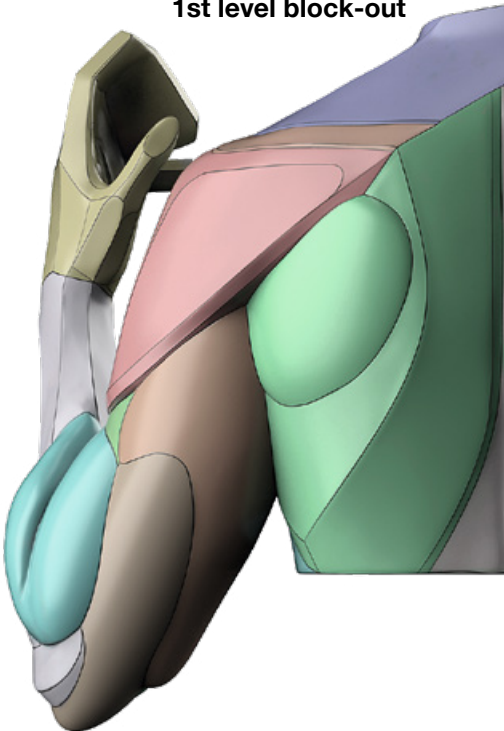


2nd level block-out



F12 – Fully-flexed neutral arm

Back

Skin**Muscles****1st level block-out****2nd level block-out**

M13 – Fully-flexed pronated arm

Front

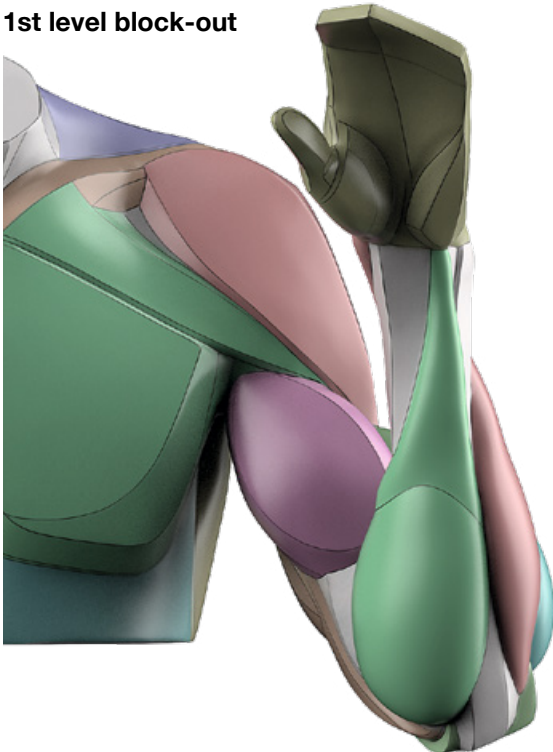
Skin



Muscles



1st level block-out

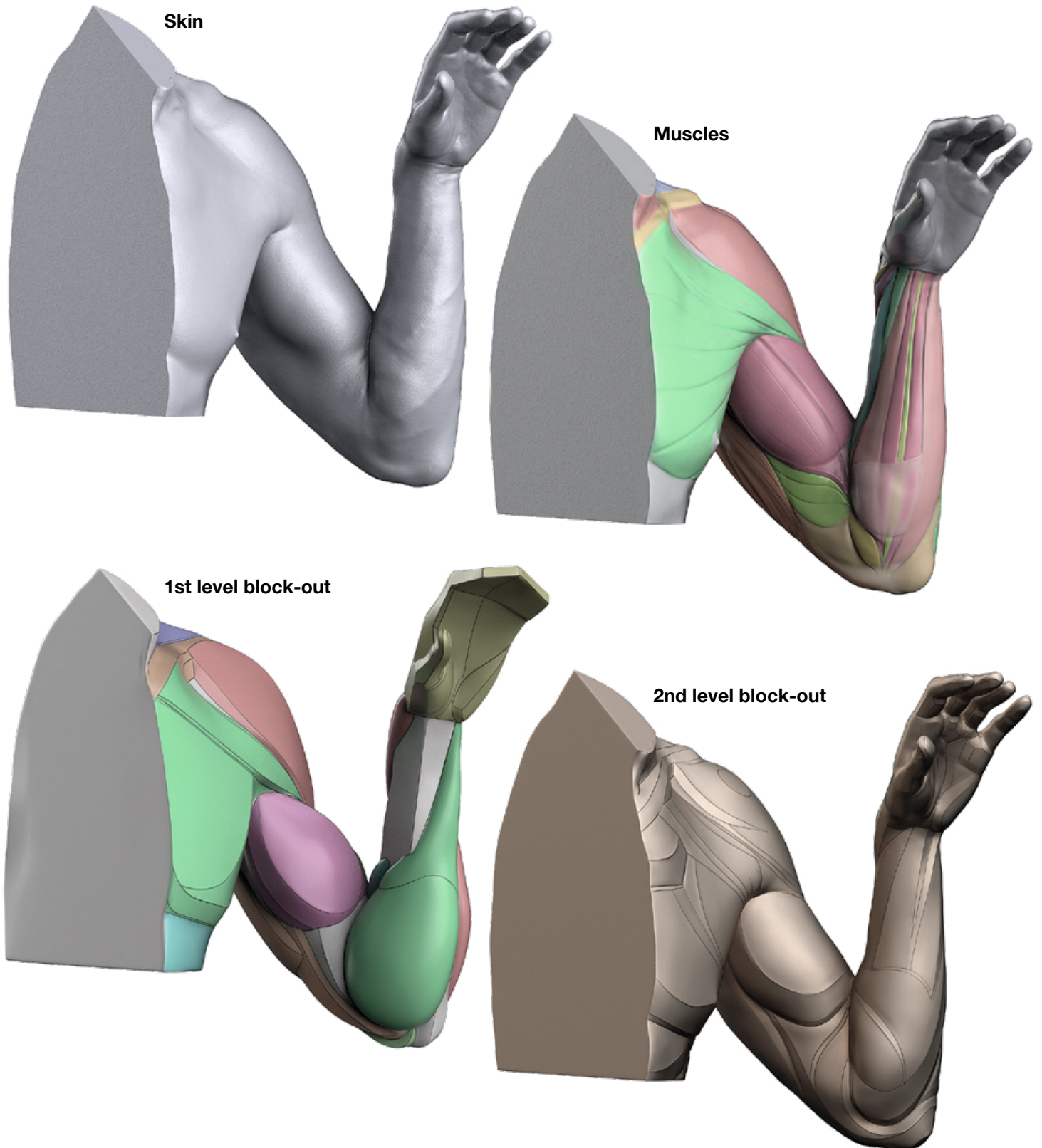


2nd level block-out



M13 – Fully-flexed pronated arm

Medial view



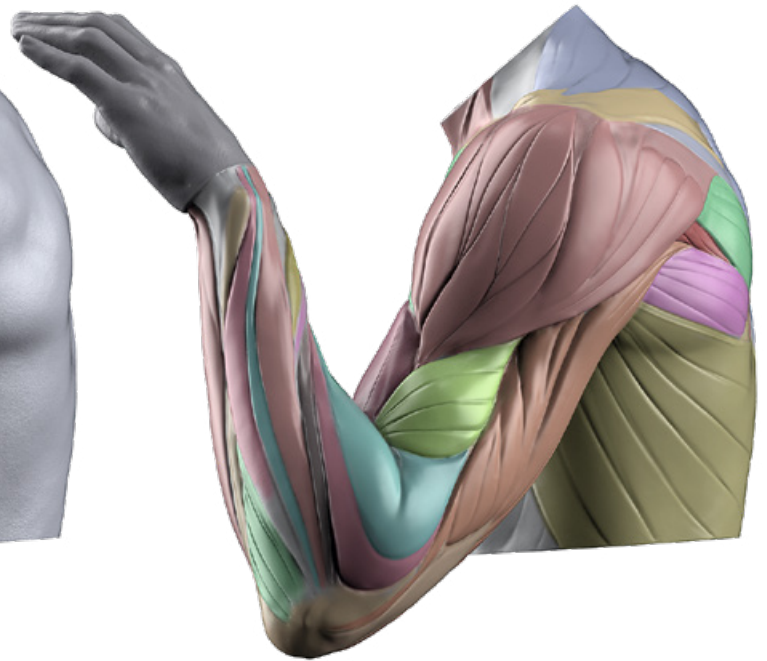
M13 – Fully-flexed pronated arm

Lateral view

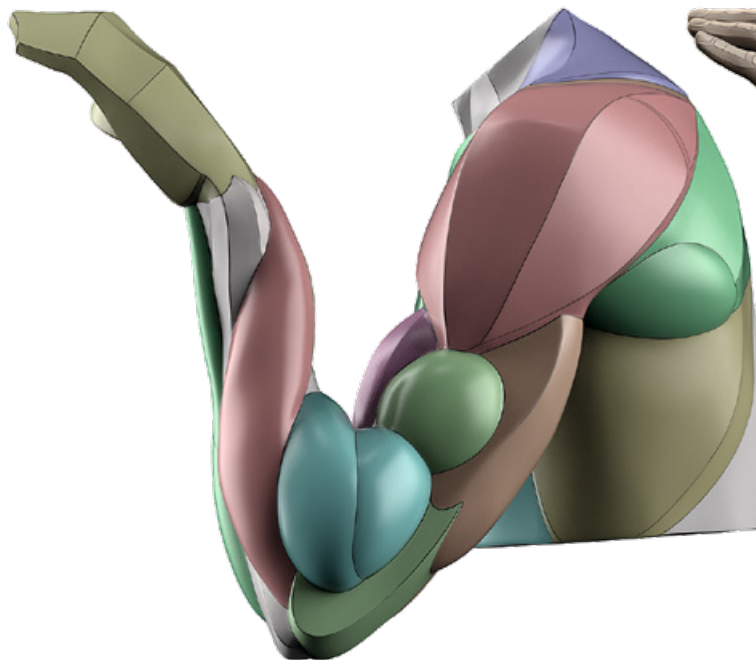
Skin



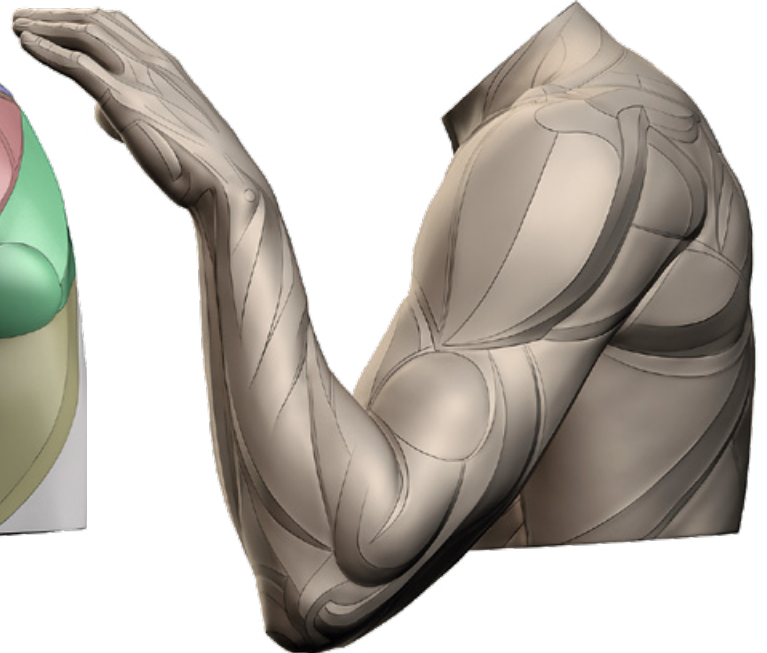
Muscles



1st level block-out



2nd level block-out



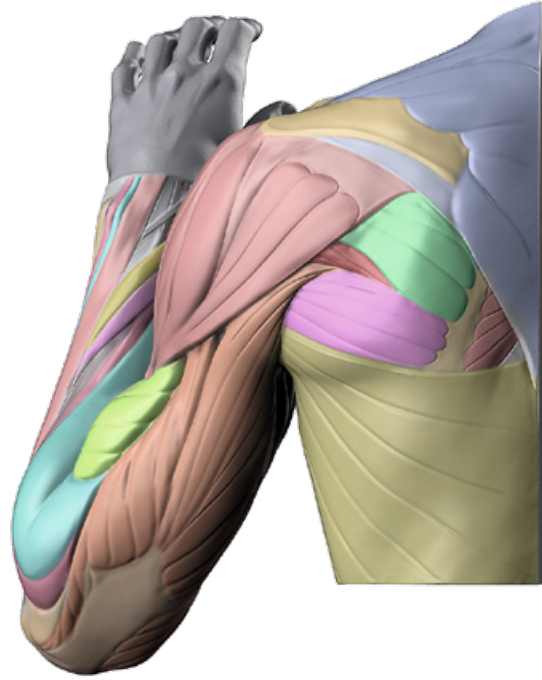
M13 – Fully-flexed pronated arm

Back

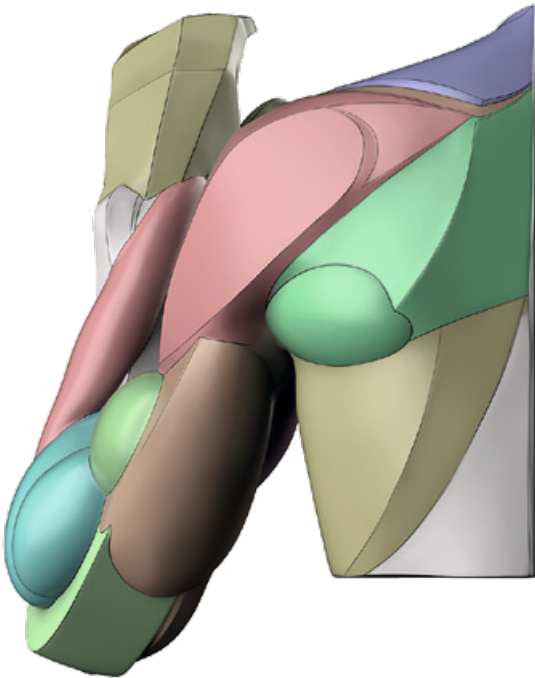
Skin



Muscles



1st level block-out



2nd level block-out



F13 – Fully-flexed pronated arm

Front



1st level block-out

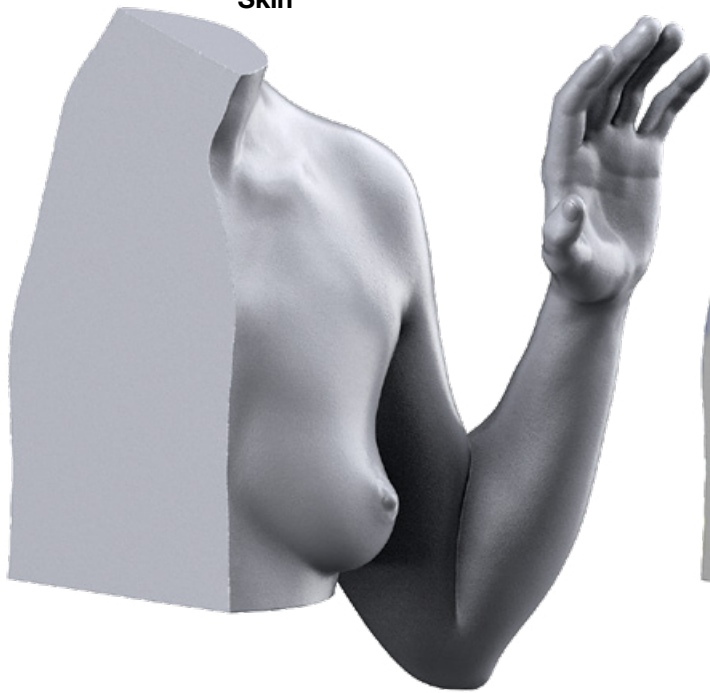
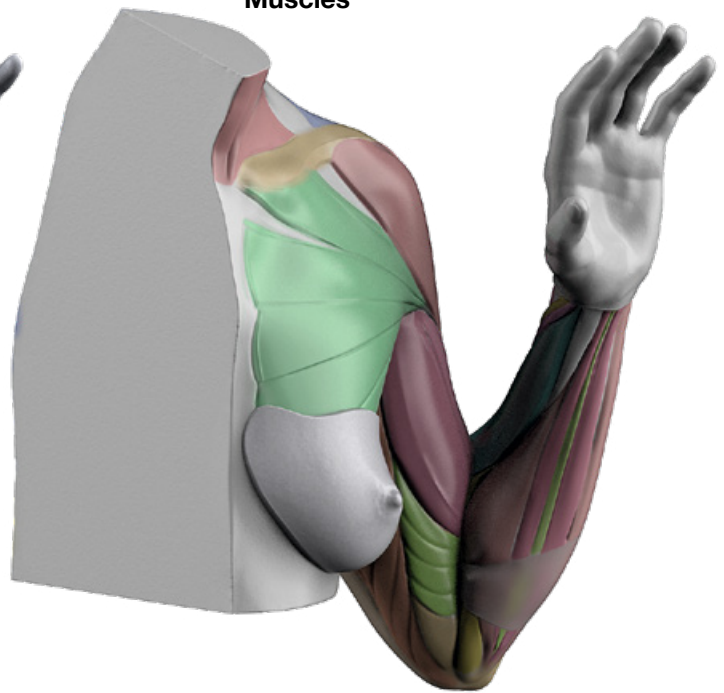
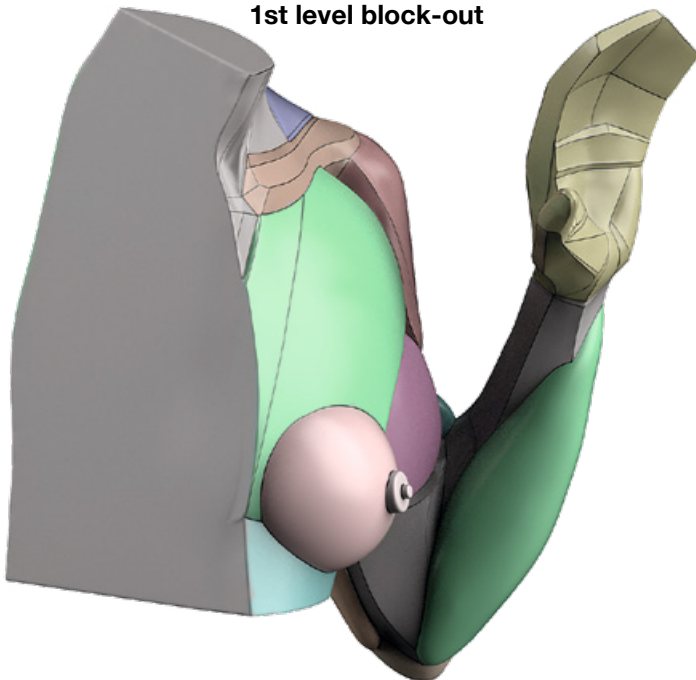
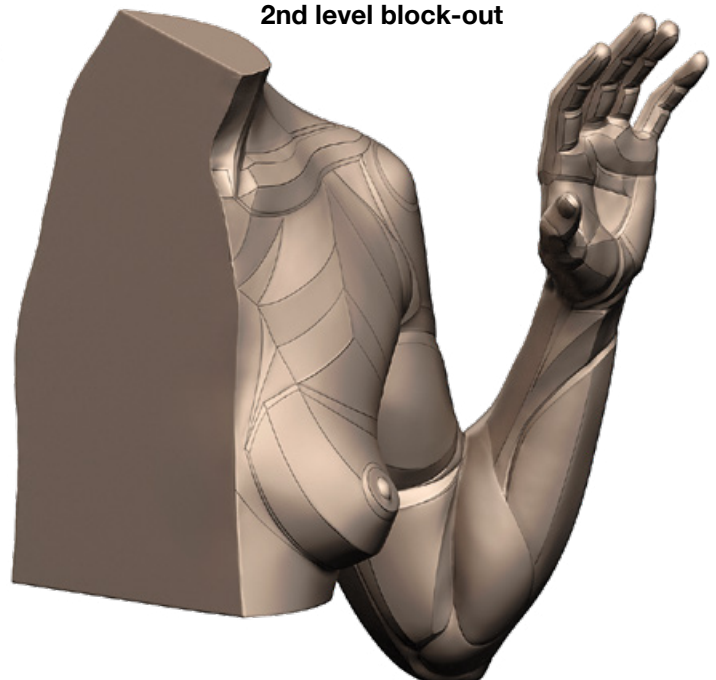


2nd level block-out



F13 – Fully-flexed pronated arm

Medial view

Skin**Muscles****1st level block-out****2nd level block-out**

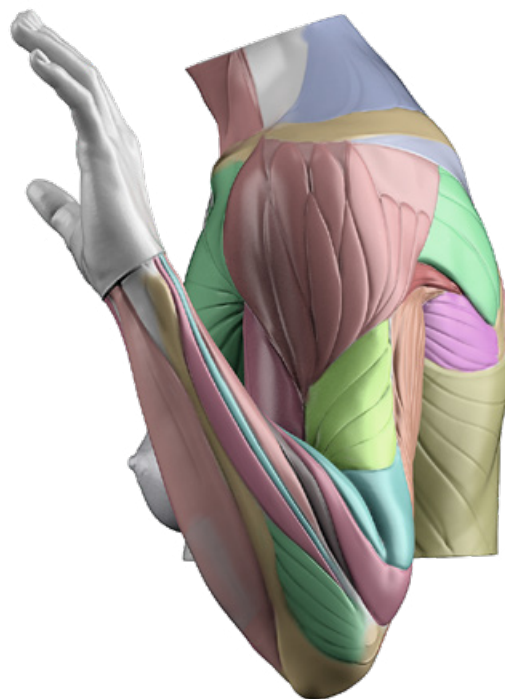
F13 – Fully-flexed pronated arm

Lateral view

Skin



Muscles



1st level block-out



2nd level block-out



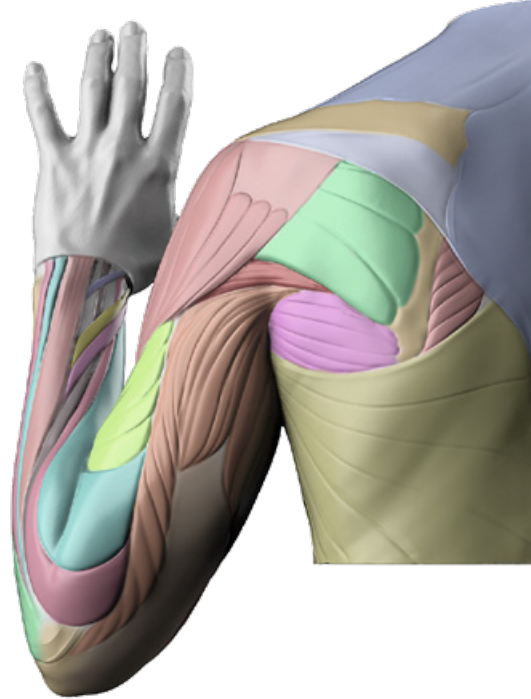
F13 – Fully-flexed pronated arm

Back

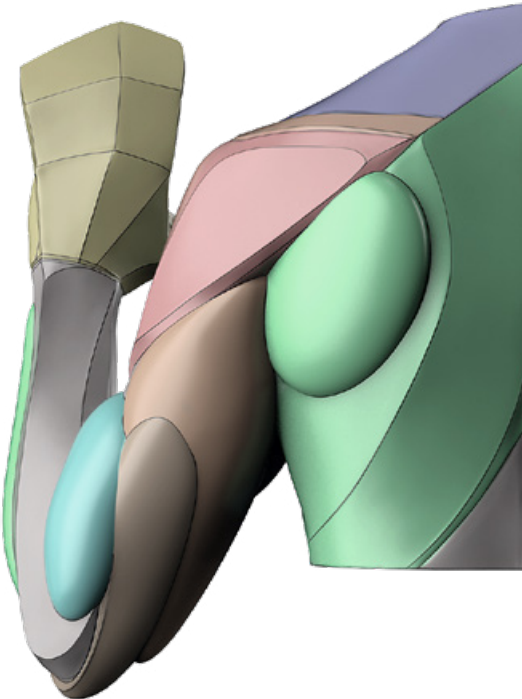
Skin



Muscles



1st level block-out



2nd level block-out



HAND MOVEMENTS

Pose catalogue

MH1

p. 204



FH1

p. 206



MH2

p. 210



FH3

p. 214



MH4

p. 218



HAND MOVEMENTS

Pose catalogue

Holding pen
p. 220



Holding chopsticks
p. 221



Holding cylinder
p. 222



Holding sphere
p. 223



MH1 – Relaxed finger spread

Dorsal view

Skin



2nd level block-out



Radial view

Skin



2nd level block-out



MH1 – Relaxed finger spread

Palmar view

Skin



2nd level block-out



Skin



2nd level block-out



Ulnar view

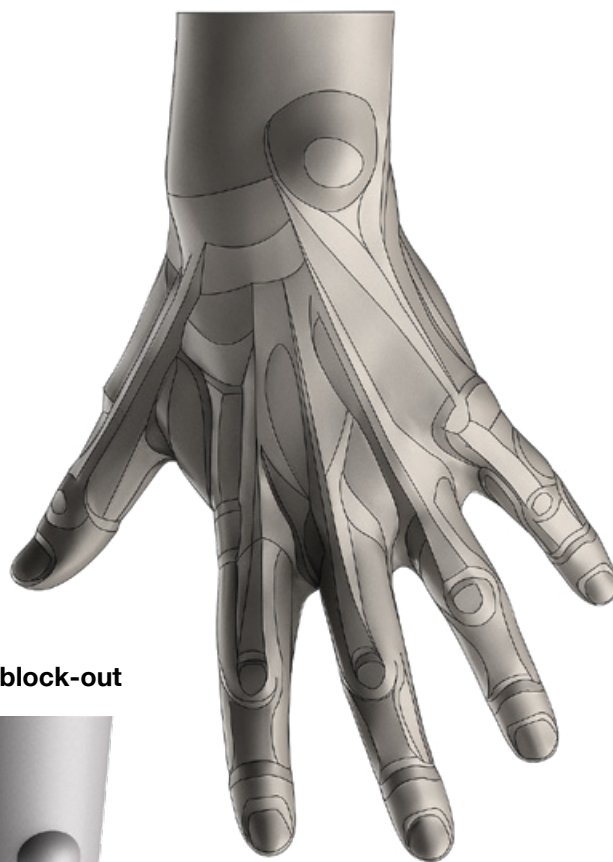
FH1 – Relaxed finger spread

Dorsal view

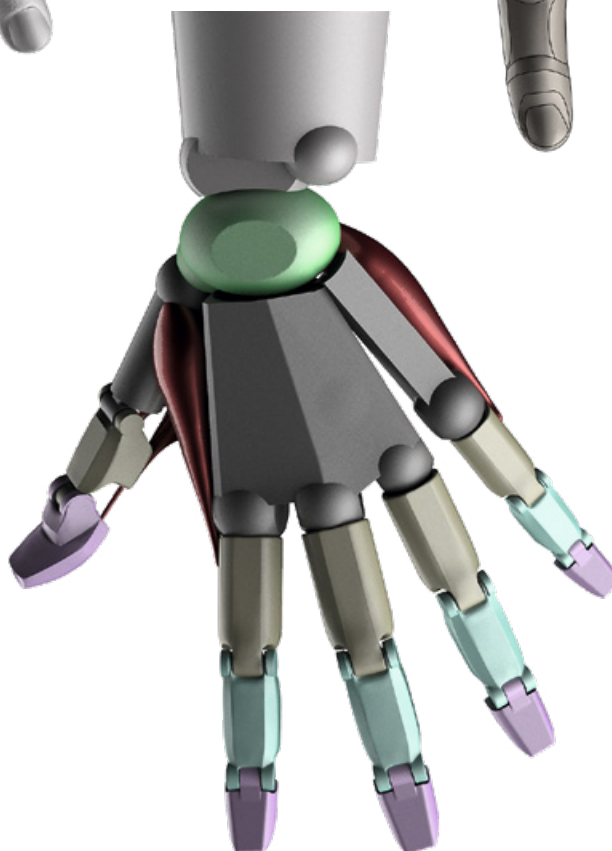
Skin



2nd level block-out



1st level block-out



FH1 – Relaxed finger spread

Radial view

Skin



2nd level block-out



1st level block-out



FH1 – Relaxed finger spread

Palmar view

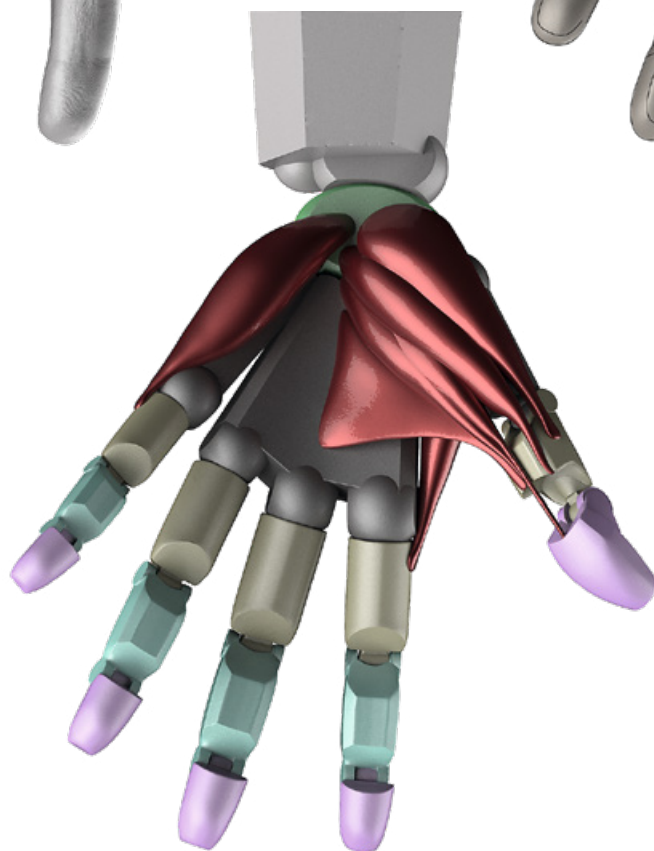
Skin



2nd level block-out



1st level block-out



FH1 – Relaxed finger spread

Ulnar view

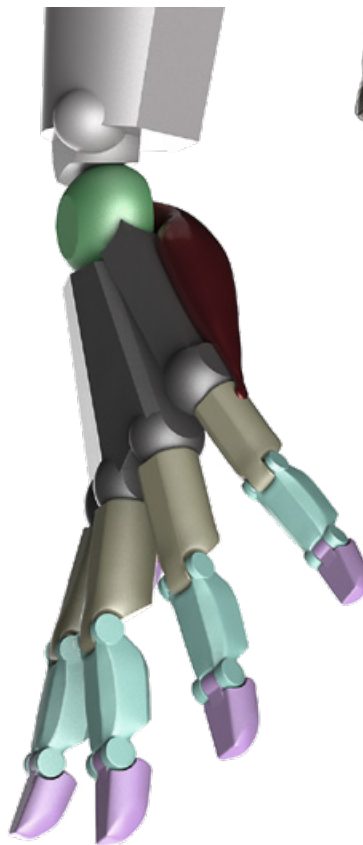
Skin



2nd level block-out



1st level block-out



MH2 – Natural hang

Dorsal view

Skin



2nd level block-out



1st level block-out



Radial view

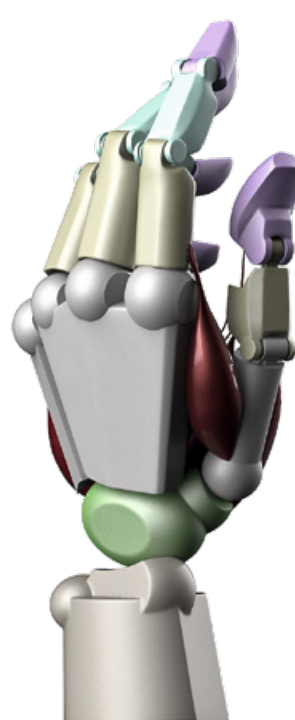
Skin



2nd level block-out



1st level block-out



MH2 – Natural hang

Palmar view

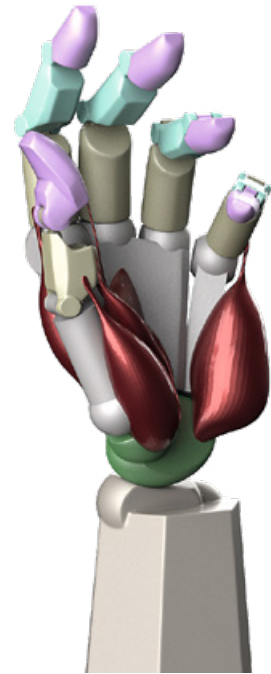
Skin



2nd level block-out



1st level block-out



Ulnar view

Skin



2nd level block-out



1st level block-out



MH2 – Natural hang

Palmaro-ulnar view

Skin



2nd level block-out



1st level block-out



Ulnar view

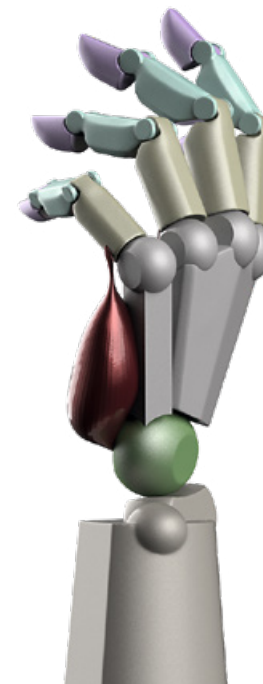
Skin



2nd level block-out



1st level block-out



MH2 – Natural hang

Multi-angle view

2nd level block-out



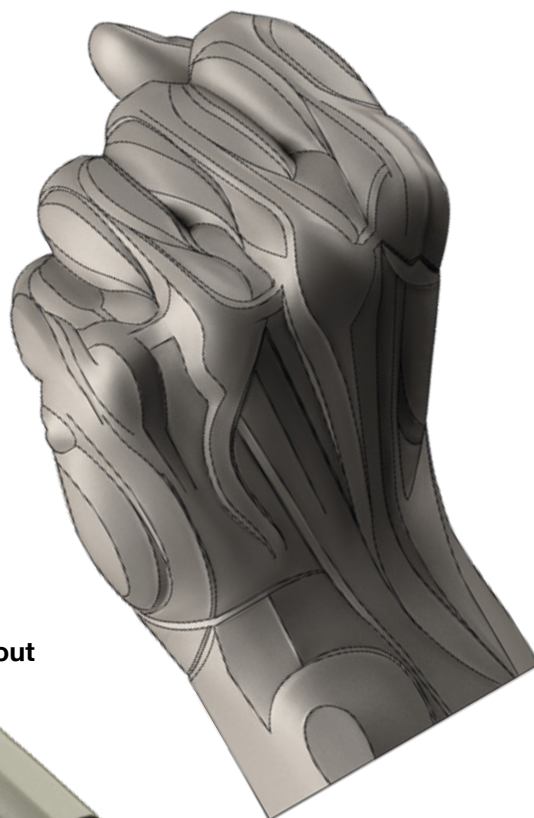
FH3 – Fist

Dorsal view

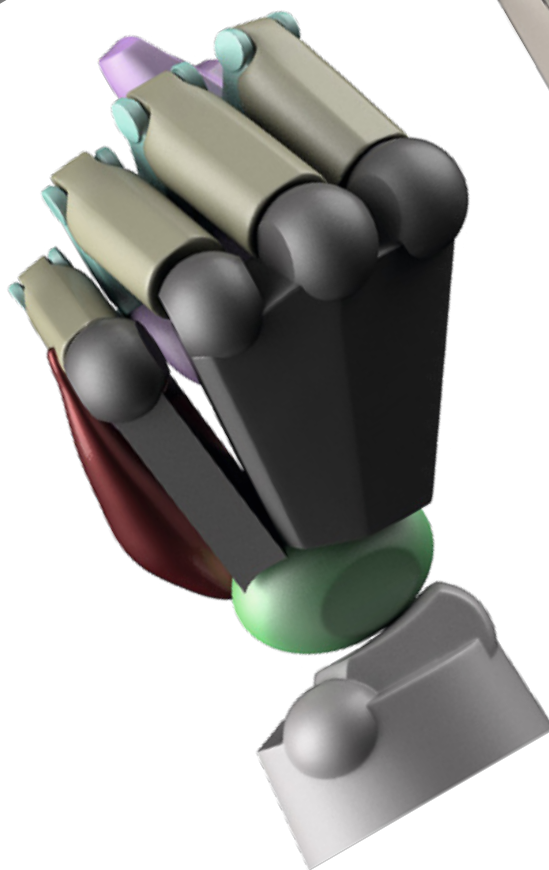
Skin



2nd level block-out

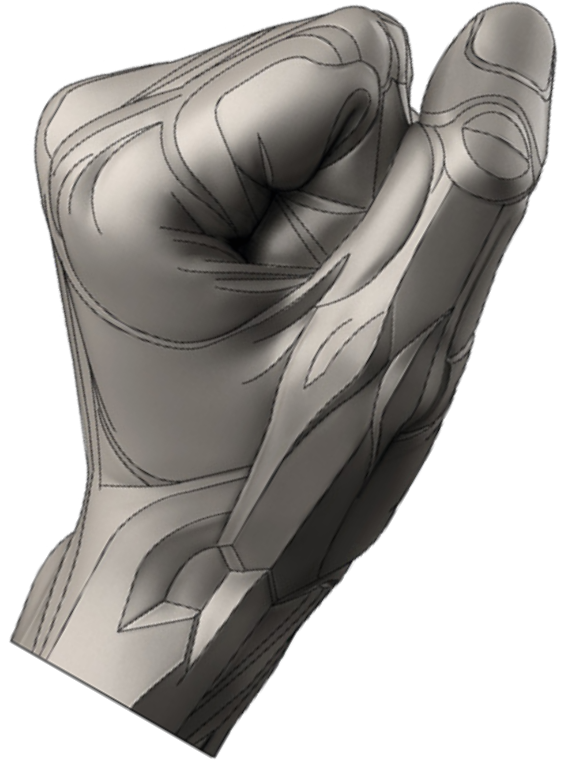
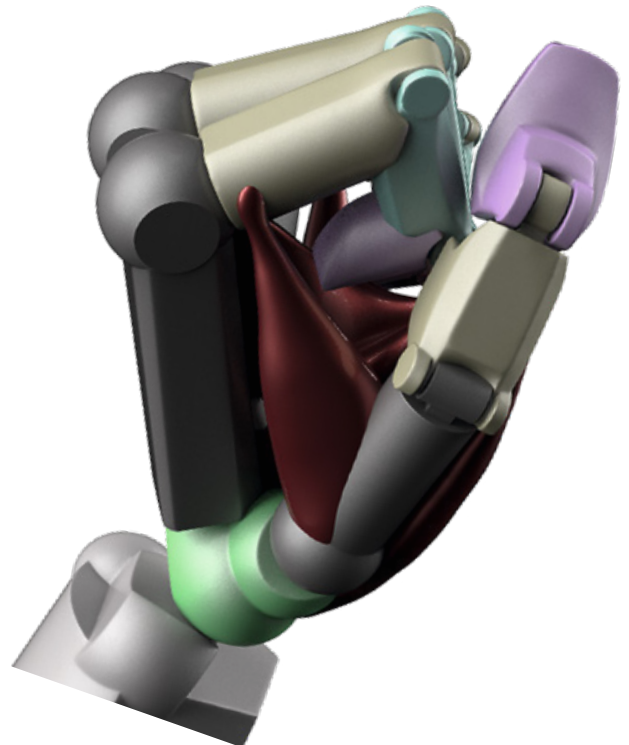


1st level block-out



FH3 – Fist

Radial view

Skin**2nd level block-out****1st level block-out****Distal end view****2nd level block-out**

FH3 – Fist

Palmar view

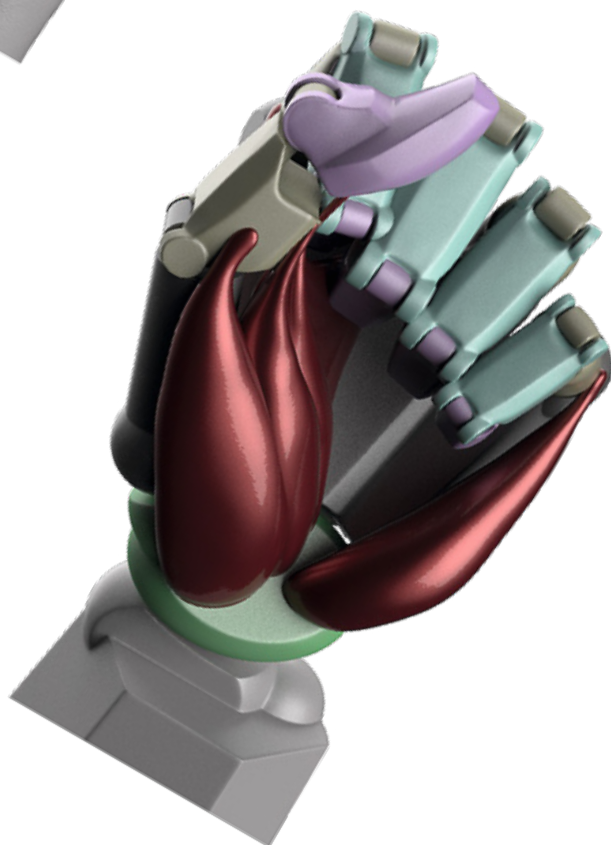
Skin



2nd level block-out

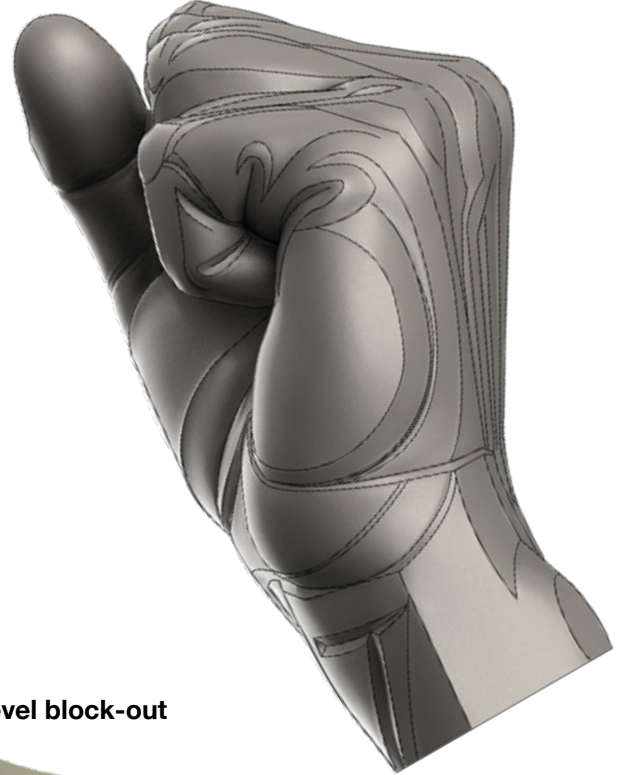
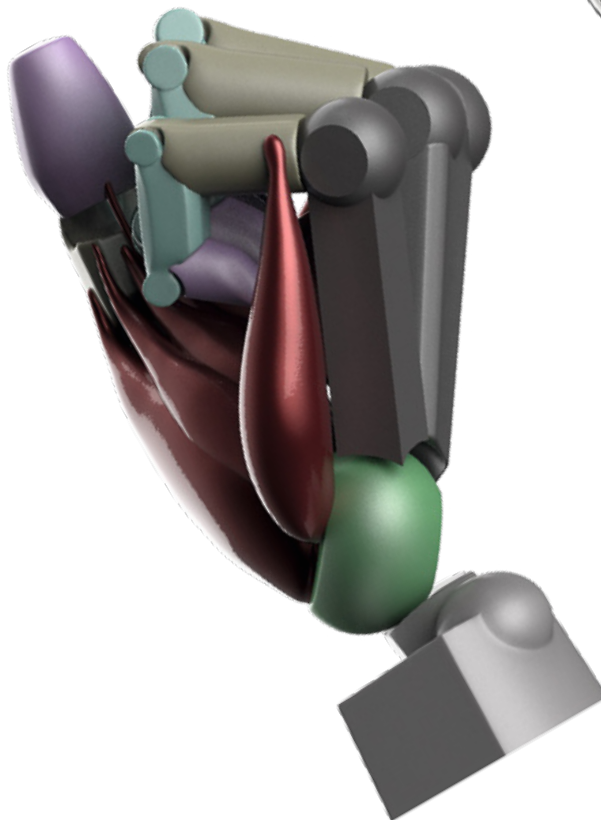


1st level block-out



FH3 – Fist

Ulnar view

Skin**2nd level block-out****1st level block-out**

MH4 – Gun grip

Multi-angle view

Skin



2nd level block-out



Skin



2nd level
block-out

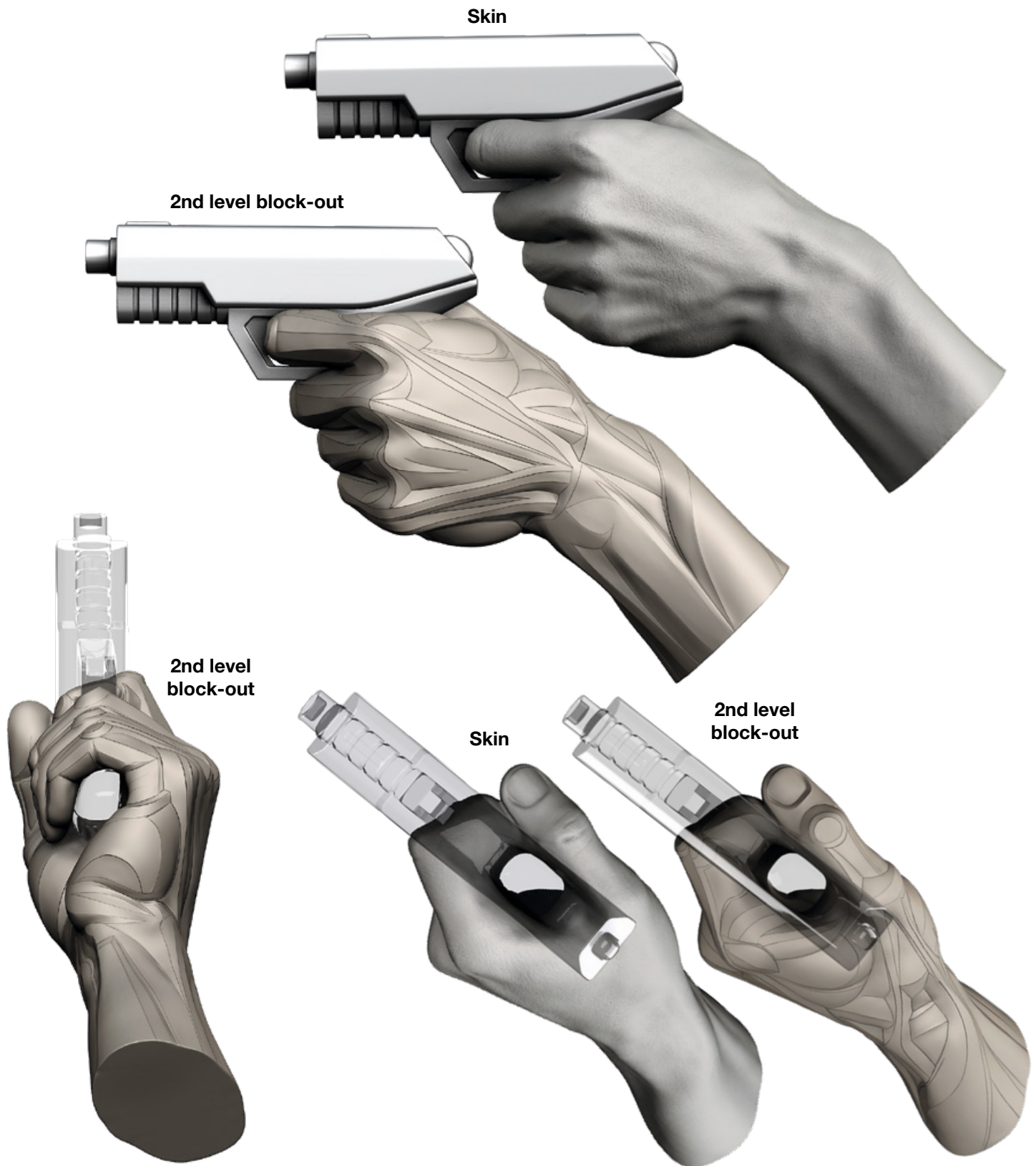


Skin



MH4 – Gun grip

Multi-angle view



Holding objects

Pen



Holding objects

Chopsticks



Holding objects

Cylinder



Holding objects

Sphere



Arm and Hand in Motion is an artist's guide to one of the most complex and dynamic parts of the human body.

The upper limb changes form constantly due to its wide range of motion – at the shoulder, elbow, forearm, wrist, and hand. To recreate believable human figures, visual artists need to understand how these movements shape what we see.

This book organizes poses by function – from shoulder rotations to arm, forearm, and hand movements. Each section shows how forms shift in motion across both male and female bodies.

Inside, you'll find a clear intro to shoulder, arm, and hand anatomy, helpful visual tips, and a large reference library of upper limb movements based on our 3D scans.

View each posture as realistic surface anatomy, color-coded muscle models, and simplified form block-outs. Selected poses are also available on our 3D Reference Tool for a full 360° study.

Whether you're working with 3D or 2D, digital or traditional methods, just starting out or refining your craft, Arm and Hand in Motion will help you build convincing, clear, and dynamic upper limbs.

Uldis Zarins teaches anatomy at the Art Academy of Latvia and is an award-winning sculptor with over 30 years of experience.

He is also the author of Understanding the Human Figure, Anatomy of Facial Expression, and Form of the Head and Neck.

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